Drug & Cosmetic INDUSTRY

SEPTEMBER, 1949

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ELMER SHEETS, Managing Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
HILDA C. McCOLLOM, Art Director

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander, Walter M. Brauneiss, C. R. Keeley, Dwight H. Early, 100 No. LaSalle St., Chicago 2; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Subscription price—$3.00 a year, in advance, Foreign Countries, $5.00. Single copies, 35c; Back issues, 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

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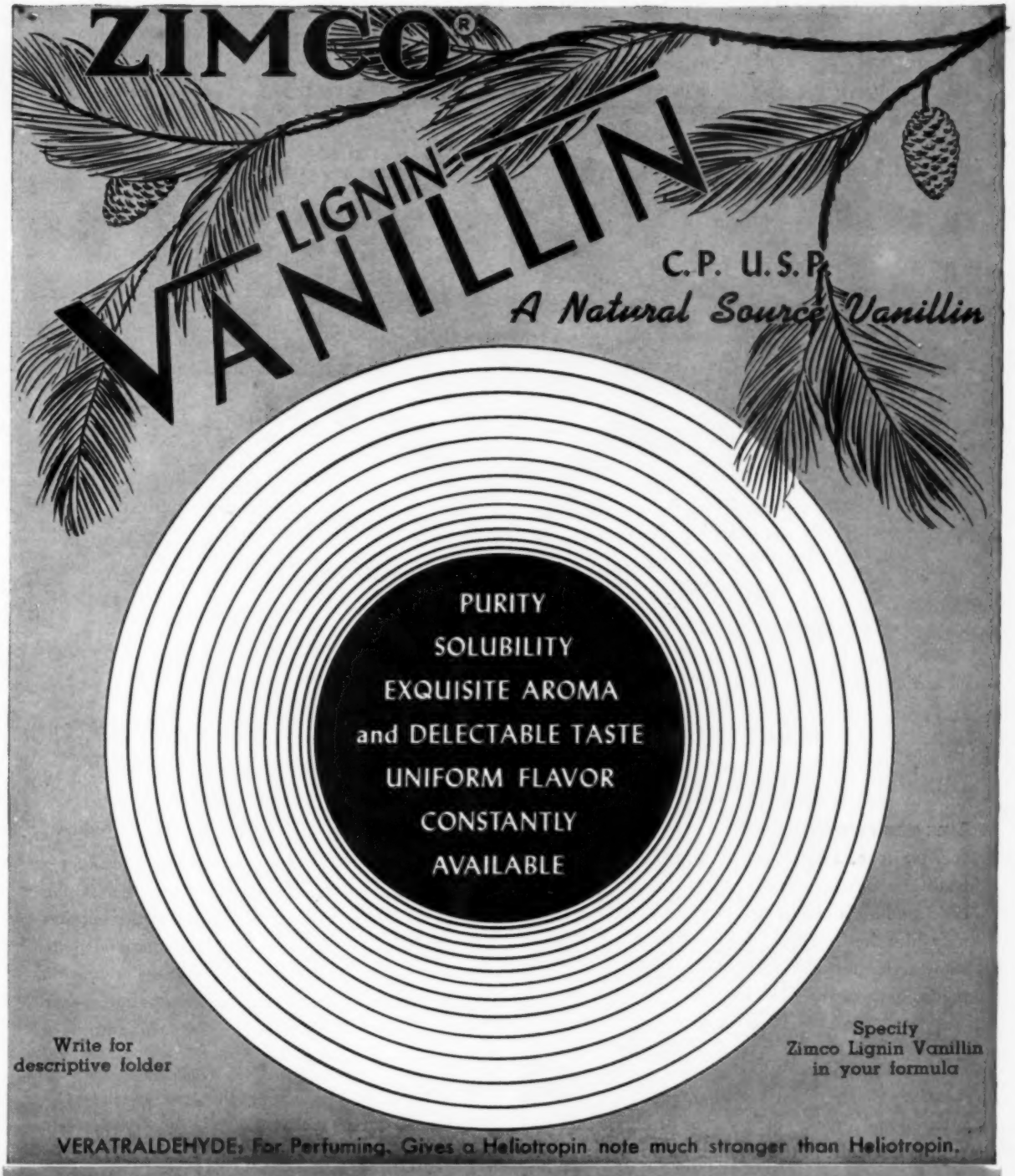

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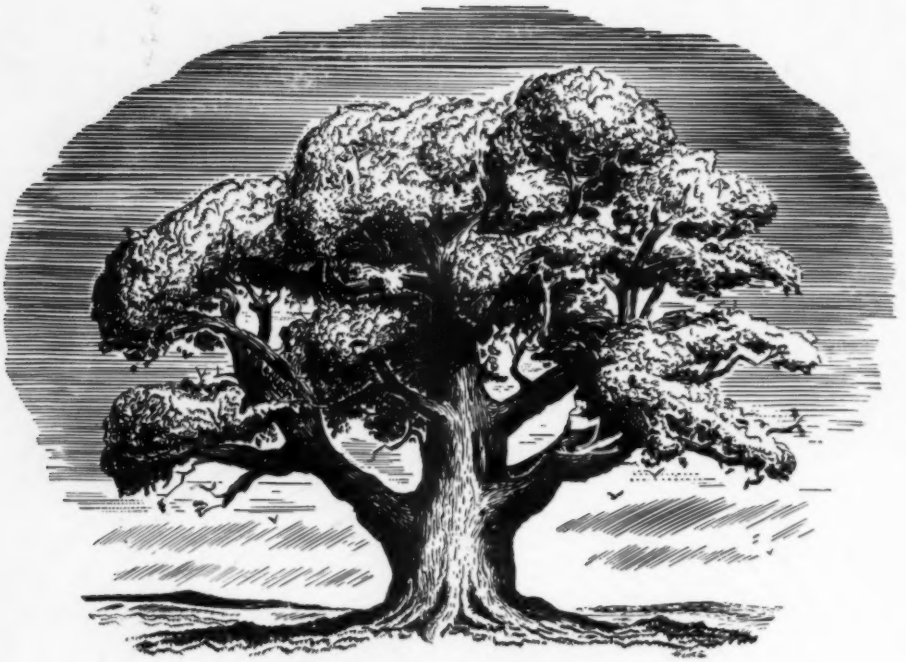

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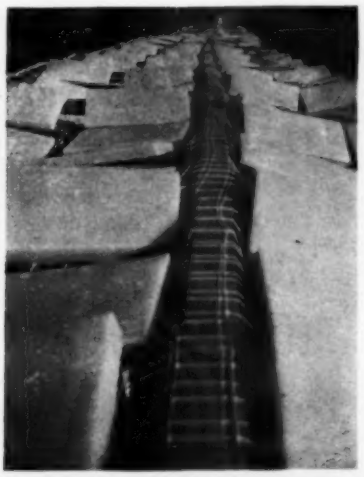

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Technical GLYCERINE NEWS

CLEANS AND LUBRICATES HAIR. Non-creamy, mildly lubricating, and effectively cleaning oil shampoos are described in a recent article in a leading publication. A typical formula contains mineral oil, sulphonated castor oil, perfume, preservative, water and glycerine. (D-7)

★ ★ ★

SULFATHIAZOLE NOSE DROPS are made with dl-desoxyephedrine hydrochloride, sodium sulfathiazole sesquihydrate, thiourea, water, and glycerine according to a formula published recently in a standard scientific journal. (D-8)

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AN IMPROVED AURAL ANALGESIC, described in a recent formulary, contains antipyrine, chlorobutanol, benzocaine, and glycerine. In this compound, glycerine acts as an active component and as a vehicle for the other medicaments. (D-9)

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READY FOR GOLF? Golfers preparing for the first game of the season are advised by a leading pro to rub their hands with a mixture of glycerine, tannic acid, and alcohol.

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I should like to know the source of those items appearing in Technical Glycerine News which I have checked below.

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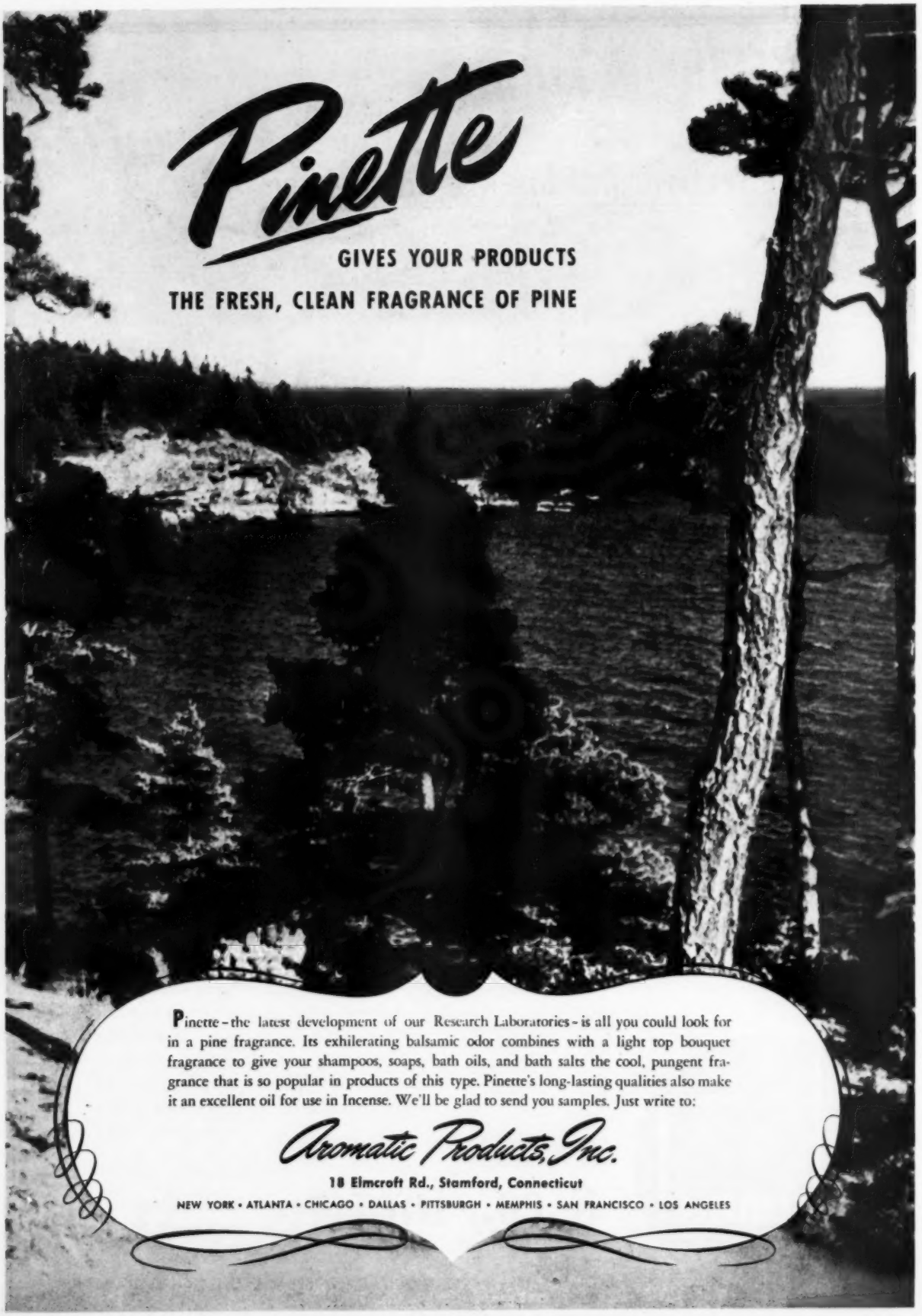
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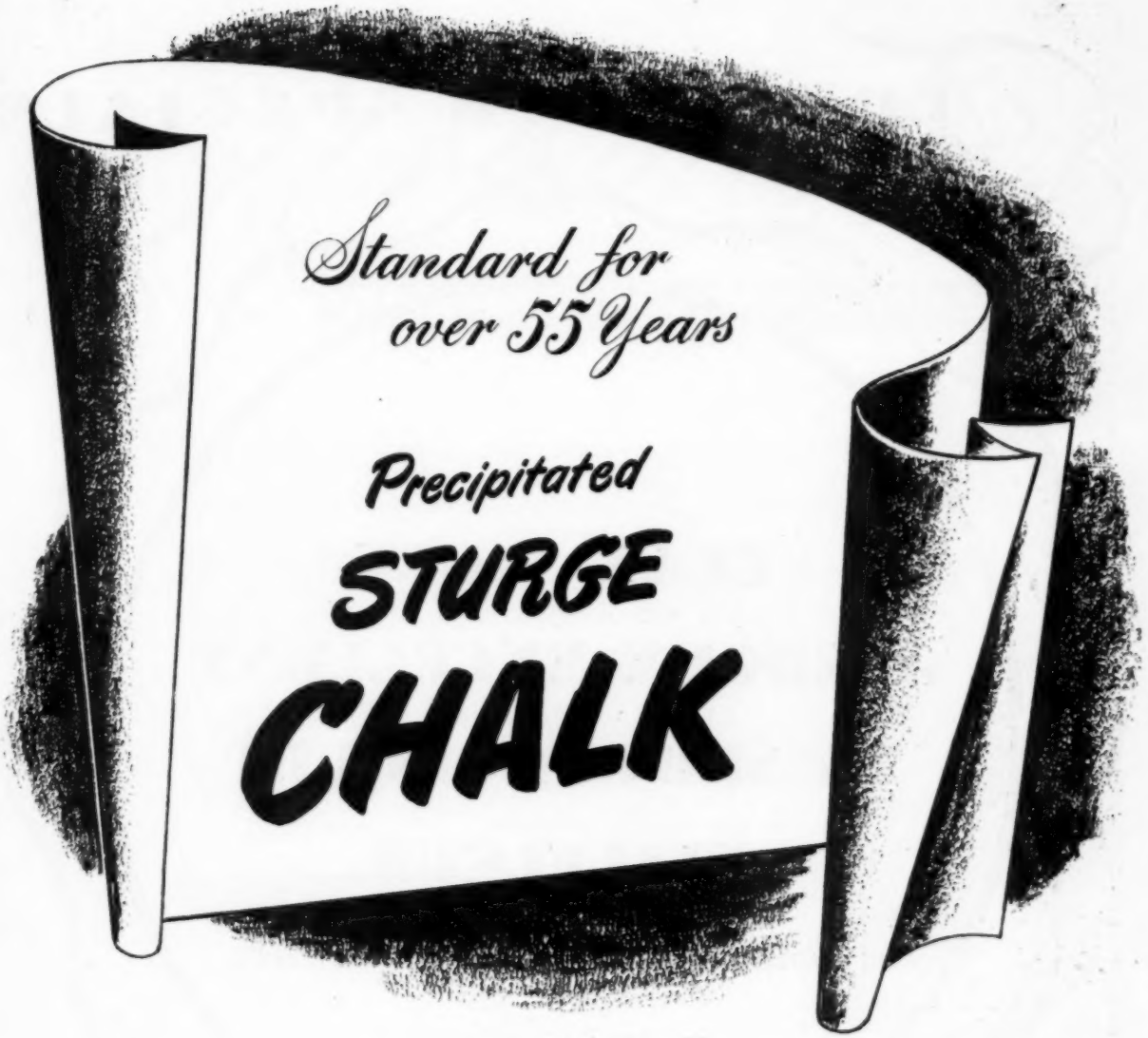

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I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

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Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

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KEEPING POSTED

Cortisone Research Committee

WHILE the value of Cortisone (Compound E) in controlling symptoms of rheumatoid arthritis is regarded as established, much remains to be learned concerning its possible untoward effects, its usefulness in other diseases and the mechanism of its action. Therefore those interested in the development of Cortisone have decided that the small amount which can be made during the balance of this year shall be used only for clinical and experimental research. The Research Corporation, a non-profit organization which administers patents in the interest of public welfare and for the furtherance of scientific research, has aided in the development of synthetic processes for making Cortisone. The Corporation will continue to further the development of these processes and to stimulate research on the mechanisms of the action of the drug. In fulfilling these functions, the Research Corporation has requested the president of National Academy of Sciences to appoint a Committee on Investigation of Cortisone, with assurance that its recommendations will be accepted as final with respect to all of the available 1949 supply.

Chester S. Keefer is chairman of this committee, and other members are Hans T. Clarke, E. A. Doisy, Robert F. Loeb, C. N. H. Long, E. K. Marshall Jr., Joseph T. Wearn. David E. Price has been appointed by the Acting Surgeon General to act as liaison between the committee and the U. S. Public Service.

Not only will the fields of rheumatism and other diseases for which relief may be anticipated continue to be investigated, but also fields of physiology and pharmacology which are basic to fuller understanding and further advance. From now on, applications for a supply of Cortisone must be submitted on a form obtained from Committee Chairman Dr. Chester S. Keefer, 2101 Constitution Avenue, Washington 25

The scant supplies of Cortisone to be available during the balance of this year are due to the scarcity of ox bile, the basic raw material, as well as to the unprecedented complexity of the manufacturing process. Merck & Co. is endeavoring to make available to the National Academy of Sciences about 200 grams per month, starting with August, or a total of 1,000 grams for the balance of this year.

Until someone finds a raw material for Cortisone which is in plentiful supply, and a relatively simple synthesis, sufficient supplies are going to present a major problem, and prices are going to remain high.

F.T.C. Cites Revlon

REVLON Products Corp. has been cited by the Federal Trade Commission for alleged violation of the anti-trust laws through "exclusive-dealing contracts in the sale of cosmetics." The Commission charges that Revlon requires jobbers of its products not to deal in competitive products. The effect "may be to substantially lessen competition" or to "tend to create a monopoly," according to the FTC. Revlon sells to some 170 jobbers besides distributing to department and drug stores, says the FTC, which also states that the jobber sales are an "important market" and a "substantial factor" in the market. The Commission cited cases in which Revlon allegedly forced jobbers to "clear their stock of competitive polishes and manicure preparations and not to reorder such items." The action is being taken under alleged violation of section 3 of the Clayton Act. In a similar action earlier this year, the Department of Justice won a suit against the Standard Oil Co. of California for its use of exclusive dealing arrangements with retail filling station operators.

Benzadrine Inhalers Replaced

BENZADRINE inhalers are being discontinued by Smith, Kline & French Laboratories, and are being replaced with Benedrex inhalers. The reason for this is that Benedrex inhalers are non-stimulating and not susceptible to improper use as was the case with Benzadrine inhalers. There is no change in other forms of Benzadrine, such as Benzadrine Sulfate Tablets, which will continue to be marketed for use on prescriptions. Benedrex—1-cylco hexyl-2-methylaminopropane—was discovered by SKF Head Chemist Dr. Glenn E. Ullyot as the result of extensive research to find a chemical capable of shrinking the nasal membranes as well or better than Benzadrine but not stimulating to the user. The new product was first placed on a test market trail in California.

Misuse of Benzadrine inhalers, particularly in penal

institutions has been under study by SKF for some time. An inhaler of iron could not be used since Benzadrine proved to be incompatible with the metal. A search for an adulterant which would produce nausea if taken internally was undertaken. Capsicum proved to be too strong. Picric acid, with its bitter taste, proved to be no deterrant.

F.T.C. Order Against Arrid

CARTER Products, Inc., has been ordered by the Federal Trade Commission to stop misrepresenting the effectiveness of Arrid deodorant. The order, also effective against Small & Seiffer, Carter's advertising agency prior to October 1946, disapproves the claims that Arrid stops under-arm perspiration; that it is more than temporarily effective in keeping the armpits dry or odorless; that its use immediately after shaving will not irritate the skin; that it's safe or harmless to use, without disclosing that it may possibly cause irritation of sensitive skins.

The FTC says that Arrid will not prevent the flow of sweat from sweat glands nor the formation of perspiration, and cannot be relied on to prevent the appearance of perspiration. The main ingredient of Arrid, according to the FTC, is an astringent which causes a swelling that contracts the openings of the sweat glands, but the swelling subsides after a short period of time.

Drug Export Bill Attacked

THE battle over the provisions of the Van Zandt Bill—the measure proposing changes in the export provisions of the Food, Drug, and Cosmetic Act—was recently resumed in hearings before the Senate Committee on Interstate Commerce. James G. Flanagan, vice-president and general counsel of S. B. Penick & Co., appeared for the American Drug Manufacturers Association, pointing out that the bill, as amended in the House, failed to eliminate certain requirements essential to the bill's objectives, but seriously interfering with legitimate drug exports. He mentioned particularly the extension to goods for export of the exacting labeling requirements for goods sold in this country. "These requirements," said Mr. Flanagan, "do not go to the problem of fraudulent misrepresentation or the wholesomeness of the product and therefore are not required in respect to export shipments to reach the primary objectives of the bill. On the other hand," said Mr. Flanagan, "they will place the American drug exporter at a serious disadvanatage since the competing foreign shipper will be under no such obligation. Accordingly, in the absence of a demonstrated need for such affirmative labeling requirements, I strongly urge the elimination of these affirmative requirements."

Mallinckrodt Chemical Export Manager Francisco Lejarsa Saenz warned that the bill would present complex problems to manufacturers of fine chemicals, jeopardizing the work of many years in building a valuable trade in the face of strong prejudice against American chemicals, stubborn competition, and against methods not always in accord with the best business practices. Such label statements as "To be dispensed by or under prescription of a physician;" "For manufacturing use only;" and "With directions for use of the drug and warning that it may be habit-forming;" if applied to foreign shipments "would be a source of confusion, distrust, expense, and loss of prestige to the American maker" said Mr. Saenz. He said that "the foreign druggist is accustomed to receive his prescription chemicals labeled according to his own pharmacopoeia and in no case do these labels bear cautions such as we use at home. What will be the foreign dispensing druggist's reaction to an American chemical prominently labeled USP or NF if the same label shows a caution notice such as mentioned above? It is not preposterous to think that doubt will creep into his mind as to whether he has a prescription chemical or one "for manufacturing purposes," that is, something of an industrial grade."

Mr. Saenz complained of the additional costs of labeling all export products in the languages of the countries of destination. Also, he pointed out, manufacturers would have to re-register—at a cost of from $25 to $50 per product in each country—all products exported because of the required changes in labeling. Bulk shipments in barrels and kegs shipped abroad are labeled as to contents, except in some instances in which foreign buyers want no identifying marks to be shown on the outside of the containers. Such requests are for prevention of theft at port of embarkation, of arrival, or in custom houses. This practice is permitted under present regulations, but would be prohibited under the Van Zandt Amendment. The Bureau of Narcotics has issued strict orders against marking these shipments in any form, and the proposed amendment would conflict with these orders, said Mr. Saenz.

Robert M. Dunning, vice-president of Vick Chemical Company, speaking for the Proprietary Association, made an excellent presentation of similar objections to the bill.

Charles Wesley Dunn, speaking for the American Pharmaceutical Manufacturers Association and the Grocery Manufacturers of America, opposed the bill in its present form, but recommended in substance that it be revised simply to prohibit the export of any food or drug which is unfit or unsafe for use or which is misrepresented from an export standpoint. Although the present law may sanction the export of such a wrongful article, which the law should not do, Mr. Dunn stated that a law revised in the way which he suggested, will accomplish the objectives of the Federal Food, Drug, and Cosmetic Act to protect health and prevent fraud. Further, he said, such a bill will not interfere with legitimate foreign trade.

Manicure Preparations Committee

CONSIDERATION of the special problems of marketing and merchandising in the manicure field is being taken up by a special committee composed of advertising and promotional personnel of manufacturers of manicure preparations and especially nail enamels who are members of the Toilet Goods Association. The committee expects to plan joint educational and promotional activity for the group as a whole.

Study on Colchicine in Cancer

CANCER studies centering around colchicine, an alkaloid derived from the bulbous herb known as meadow saffron or autumn crocus, are to be administered by Dr. Glenn E. Ullyot, head of the organic chemical section of the research laboratories of Smith, Kline & French Laboratories, under a grant of $10,800 awarded by the Cancer National Institute. This is one of the first grants made by the National Cancer Institute to a non-academic research center. Colchicine

is known to arrest multiplication of cancer cells in experimental animals, but it is also injurious to normal cells. Preliminary research with closely related compounds indicate that there may be some hope of developing colchicine derivatives with a more specific action against the disease. Widely experienced in colchicine chemistry, Dr. Ullyot will try to find a cancer-inhibiting compound that will not damage the host.

Drug Exports Restrictions Eased

ABOUT the middle of last month the Department of Commerce announced that the only drug products for which export licenses are now required are the following:

Schedule B Number	Drug Products
813583	Bismuth, oxide, nitrate and subnitrate
813588	Quinidine alkaloid and derivatives
813593	Radium, salts and compounds—Radon and Radioactive Isotopes
813593	Inorganic Medicinal Chemicals
813595	Organic Medicinal Chemicals

In connection with Schedule B numbers 813593-813595, licenses are required within these classifications only for those medicinal chemicals for which export controls on other chemical grades are indicated on the positive list, says T. W. Delahanty, Chief, Consumers Merchandise Branch. However, the number of such chemicals is comparatively small and the trade burden should be relatively much less than formerly. The G. L. V. limit applicable to each medicinal chemical for which a license is required, is the value stated elsewhere on the positive list for the same chemical. A single G. L. V. shipment may include two or more chemicals up to its G. L. V. limit. In the past, single export applications for shipment of medicinal chemicals under Schedule B 813593-813595 have consisted of a number of miscellaneous items, any of which seldom exceeded the then authorized G L. V. limit. Consequently, this expanded G. L. V. provision should materially reduce the number of applications and products to be listed on applications for license. According to Mr. Delahanty, it has not been unusual for a single shipment to consist of 50 or more items, in which the value of every single product was below the G. L. V. limit. Therefore, no license is now required for a product, unless listed on the positive list and such products should only be listed on an application where the G. L. V. is in excess of the authorized value limit of the specific product.

Brand Names and Teen-Agers

THE effect of brand names in drawing teen-age boys and girls into drug stores has been studied by the Brand Names Foundation with the cooperation of teachers of 44 high schools and colleges in all sections of the country, embracing 1,800 students in purchase of 86 products. Products studied included deodorants, lipstick, shampoo, face cream, powder, tooth paste, hand cream, toilet soap, aspirin, toothbrushes, hair tonic, razor blades, shaving cream, talcum, shaving brushes. Students were asked which of four factors was the primary consideration governing their purchases. These four considerations are: 1. Demand for one specific maker's brand which is preferred above all others. 2. Preference for one of several leading brands. 3. Reliance on store reputation and recommendation. 4. Convenience or handy location of outlet.

In the instance of each product, except shaving brushes, 60 per cent or more of the students buying the product did so primarily on brand demand or preference for one of several brands. The percentages of boys and young men who named brand influence as the governing consideration were: hair tonic, 93 per cent; razor blades, 89.4 per cent; tooth paste, 87.3 per cent; talcum, 71.6 per cent; aspirin, 69.1 per cent; tooth brushes, 67.6 per cent; shaving brushes, 46.7 per cent.

Percentages of the coeds were comparable. They were: deodorants, 95.2 per cent; lipstick, 94.3 per cent; shampoo, 94.0 per cent; face cream, 92.2 per cent; powder, 82.8 per cent; tooth paste, 91.0 per cent; hand cream, 90.4 per cent; aspirin, 81.0 per cent; toothbrushes, 80.0 per cent.

In contrast with brand names, dealer recommendation and store location governed purchases in only small minorities as follows: toothbrushes (boys), dealer recommendation, 6.8 per cent, store convenience, 25.4 per cent; (girls) dealer, 7.2 per cent, convenience, 12.8 per cent; tooth paste (boys) dealer 1.5 per cent, convenience, 11.2 per cent; (girls) dealer, 2.5 per cent, convenience, 6.5 per cent; talcum (boys) dealer, 6.5 per cent, convenience 22.2 per cent; powder (girls) dealer, 4.3 per cent, convenience, 3.5 per cent; razor blades (boys) dealer, 0.4 per cent, convenience, 10.2 per cent; shaving brushes (boys) dealer, 17.8 per cent, convenience, 35.5 per cent; shaving cream (boys) dealer, 2.5 per cent, convenience, 14.5 per cent; lipstick (girls) dealer, 2.7 per cent, convenience, 3.0 per cent; face cream (girls) dealer, 3.9 per cent, convenience 3.4 per cent; hand cream (girls) dealer, 4.9 per cent, convenience, 4.9 per cent; deodorant (boys) dealer, 3.6 per cent, convenience, 15.4 per cent; (girls) dealer, 0.7 per cent, convenience, 3.7 per cent; hair tonic (boys) dealer, 1.2 per cent, convenience, 6.0 per cent; shampoo (girls) dealer, 0.7 per cent, convenience, 4.3 per cent; aspirin (boys) dealer, 3.4 per cent, convenience, 27.5 per cent; (girls) dealer, 5.8 per cent, convenience, 12.8 per cent.

Children's Bayer Aspirin Unflavored

INTERESTING is the fact that Bayer's new children size Bayer Aspirin tablets (2½ grains) "are not flavored, or colored, so children will not mistake them for candy." Flavoring and coloring of medicinal preparations so as to make them attractive to children is a moot question. There are many who are opposed to this practice because of the danger expressed by the Bayer Company, while there are others who are of the opinion that when a child is ill, the main thing is get it to take the prescribed medicines with the least effort. Making drugs attractive to take demands that supplies of the medicines be made inaccessible to children. This places a responsibility upon a parent that he or she might not be able to perform successfully resulting in tragedy.

Vitamin B_{12} U. S. P. XIII

BECAUSE of the immediate importance of vitamin B_{12} in the treatment of pernicious anemia The U. S. P. Revision Committee is not waiting for publication of U. S. P. XIV, but is admitting to U. S. P. XIII by interim revision the following items: Crystalline Vitamin B_{12}, Crystalline Vitamin B_{12} Injection,

Vitamin B_{12} Concentrate. With reference to assay methods for vitamin B_{12} content, the U. S. P. Anti-Anemia Preparations Advisory Board, through Dr. Robert M. Heinle, chairman, has issued the following statement:

"Although progress is being made toward the attainment of a reliable microbiological assay for the vitamin B_{12} content of commercial anti-anemia preparations, general agreement on a standardized procedure for such assays has not yet been reached. Consequently, with the exception of preparations of crystalline vitamin B_{12}, it is considered to be contrary to the best interests of patients and of the medical and pharmaceutical professions for the result of unofficial assay procedures for vitamin B_{12} to be stated on the labels of the U. S. P. anti-anemia preparations. Thus, until such time as the relation between vitamin B_{12} content or some other measureable component and the clinical and hematopoietic activity of U. S. P. anti-anemia preparations has been established, only the present U. S. P. unitage with which the medical profession is familiar should be employed. It is hoped that eventually a suitable microbiological assay procedure may entirely replace the present U. S. P. units which are based on clinical evaluation of anti-anemia potency."

The First Ammoniated Tooth Paste

"IN ORDER that truth may prevail," G. L. Scholer, general sales manager of Van-S Laboratories, Oakland, Calif., informs us that "even though Dentrix was not 'the first nationally advertised' or 'nationally known dentifrice brand,' it was the first ammoniated tooth paste—period." Mr. Scholer states further that: "The development of Dentrix Dental Cream, containing dibasic ammonium phosphate and urea, was completed the beginning of August, 1947. Distribution of Dentrix Dental Cream to the Western area was initiated in January, 1948. This was at least a year before any other tooth paste containing dibasic ammonium phosphate and urea appeared on the market. The method of stabilizing dibasic ammonium phosphate and urea in Dentrix Tooth Paste is patent pending," says Mr. Scholer.

Dental Association Asks Caution

"DON'T expect too much from your new ammoniated dentifrice as a preventive of tooth decay, it is still in the experimental stage," said the Journal of the American Dental Association editorially last month. Many of the claims now being made for the new dentifrices are not warranted by present scientific evidence, says the Journal.

"Whether ammoniated dentifrices will prove as effective in sweeping away caries as their advertisers have been in sweeping the country with glowing claims, time alone will tell. Meanwhile the public will have the privilege of being guinea pigs, the dentist will be extremely cautious in his recommendations and the purchaser will brush his teeth with tongue in cheek if such is physically possible." The Journal said that while preliminary reports have indicated that the ammoniated preparations may help prevent decay, it will be at least another year or longer before sufficient tests have been carried out to provide a proper evaluation of the new products. Because the new dentifrices may be effective, at least in part, the Association has not tried to discourage the public from using the ammoniated preparations. As to the future, the Journal pontifically declares:

"The profession, rightfully, will withhold judgment on ammoniated dentifrices until clinical trial and carefully controlled studies have proved their worth."

Reduction of the count in the mouth of lacto acidophilus bacillus, the germ that is currently charged with being the cause of tooth decay, is the principal claim of the ammoniated dentifrices. However, several other dentifrice ingredients and combinations have since been claimed to be as effective in control of the l. a. count. In fact the latest ingredient to stake a claim in this control is none other than sodium bicarbonate. A recent study at the School of Dentistry, Western Reserve University, to determine the value of sodium bicarbonate as a dentifrice beyond its detergent action, demonstrated that the chemical inhibits the growth in vitro of l. a. When the findings were extended to the oral cavity, the l. a. counts showed a general downward trend during the period sodium bicarbonate was used as a dentifrice. When film and food debris were loosened by brushing with bicarbonate and washed away with a thorough rinse, the media for growth of other bacteria was done away with, and researchers state that no dentifrice can do more. Volume 27, No. 2 of Dental Research contains this report.

A.M.A. and Toni Investigation

"THE Cold Permanent Hair-Waving Process—A Dermatologic and Clinical Study" by Howard T. Behrman, M. D., Frank C. Combes, M. D., Gustav Weissberg, M. D., and Michael G. Mulinos, M. D., New York; and Milton M. Hurwitz, M. D., St. Paul; "with the assistance of Jerome Kaufman, M. D., Herbert Fishbein, M. D., and Willard F. Greenwald, B. S., Ch. E., New York, "appeared in the Journal of the American Medical Association for August 13, 1949. From the title and sub-title of the article, one might be led to believe that the "study" dealt with products to be found in the market and with the reaction of people to them. However, the first paragraph of the report which "concerns the effects of certain cold wave lotions on the health of 1,200 persons . . ." it is stated that "The material employed in these tests was the Toni Home Wave." So that the conclusions of the study—which are most favorable—be not applied to cold wave preparations of other manufacture, the first paragraph next states:

"Because the chemical reactivity of cold waving lotions is affected by the concentration of ammonia and ammonium thioglycolate, by the alkalinity (pH) and by the type and amount of wetting agent used, the data here reported cannot be applied to lotions containing ammonium thioglycolate with different concentrations of the adjuvants."

The first paragraph of press release on the report read: "A popular and nationally advertised cold permanent hair-waving process (Toni Home Wave) was found to be "safe for general use" in a test on 1,200 women and men who volunteered for a study under medical direction, the current (August 13) Journal of the American Medical Association reports."

This is the first time to our knowledge that a direct tie-up between an advertised cosmetic product and publication in the J. A. M. A. has occurred. Why the sudden change, in policy on the part of the Journal we do not profess to know. Perhaps subsequent develop-

ments or revelations will indicate whether this type of "cooperation" has to do with Editor Morris Fishbein's pending turning over of the editorship to a successor, or with the determination of the A. M. A. to control cosmetics through its recently established Committee on Cosmetics. Even though we have not as yet found out the reason for this unusual occurrence, we thought that it was best to bring it to the attention of the industry. We shall keep our ear to the ground and shall keep you informed as to future developments.

Pharmaceutical or Chemical Maker?

TAKING issue with our piece on "Pharmaceutical or Chemical Maker?" which appeared in the July issue, George L. Schultz, vice-president of Schulton Incorporated, writes:

"I am an enthusiastic reader of your magazine and think both the drug and cosmetic industries are most fortunate in having such a fine publication. However, I would like to take issue to an editorial of yours on page 22 of the July volume entitled "Pharmaceutical or Chemical Maker?"

"This is America, where in business we practice the system of free enterprise. There are no boundaries or fields within which a group of manufacturers have an exclusive right to operate. Any manufacturer has every moral and civil right in America to make and sell on a profitable basis for the ultimate benefit of Mr. and Mrs. Consumer all that he desires, in accordance with his own economic wisdom and our sufficiently developed customs concerning monopolistic practices, as described for us by law and by rulings of the courts.

"I write you because I object to the inference you raise—that there are ethical boundaries as to whether or not a manufacturer should make his raw materials, and vice versa, in the case of the "basic-chemical" manufacturer expanding toward the consumer. I also have strong objections to your suggestion that there might be, or should be, retaliation on the part of either. There should be no such thoughts. We have in America good, clean, free competition, or, as the saying goes, "the man who builds a better mouse trap . . ."

In these respects, I think your editorial might do definite damage in having a tendency to develop in the thinking of some the idea that they have particular "rights." The less time we spend thinking what the other fellow should do and should not do, and thinking of what "rights" we have, the more time we can devote to be creative, constructive, and productive."

Resistance to Atomic Radiation

THE Atomic Energy Commission reports that it may be possible to build up resistance to atomic radiation through injections of female sex hormones and cysteine. It has worked on mice. In its semi-annual report the Commission also says that treatment of radiation sickness among casualties of atomic attack may be made more effective by toluidine blue and protamine, which substances have been found to check bleeding caused by exposure to radiation. On the beneficial side of the ledger, radiocactive elements have been used effectively in the treatment of thyroid cancer, and the two blood diseases, leukemia and polycythemia vera. They have also been used to locate brain tumors, to diagnose maladies resulting from lack of hormones, and to relieve pain and distress in angina pectoris and congestive heart failure.

Cortisone Raw Material from a Botanical

THE search for a source of starting material sufficient to permit production of enough Cortisone to meet the anticipated demand for this recently discovered drug, has ended with finding that a botanical drug—the seed of strophanthus sarmentosus—is a potentially unlimited source of a raw material which is much nearer in chemical structure to Cortisone than the presently used raw material which is a small fraction of ox bile, named desoxy-cholic acid. Not only were potential supplies of ox bile far too insignificant to permit production of sufficient supplies of this most important product, but 37 chemical steps were required in the process of converting the desoxy-cholic acid into Cortisone. Seventeen steps are eliminated when the raw material from strophanthus seed is used, only 20 steps being required to convert this material into Cortisone.

The strophanthus plant is a vine which grows as high as eighty feet on the trunks of African trees. Because of the plant's potential importance for public health and its equally great potentialities as one of the world's major economic crops, plans have been initiated under the auspices of the U. S. Public Health Service to send an expedition to Africa to obtain a large supply of seeds, roots, cuttings, and plants. These would be transplanted in tropical areas under the jurisdiction of the United States so that this country would never be in danger of being cut off from supplies as was the case with quinine and rubber in the last war. Secrecy was first connected with these plans, but recently it was found that the plant grows abundantly in Liberia where American capital is already invested in rubber plantations and development of the country's resources. Since the plant grows in equatorial regions, it may become an important source of income for Venezuela, the Philippines, the East Indies, and great belts in equatorial Africa. It might also prove a boon to the Pacific islands under the care of the United States.

Immediate supplies will not be sufficient to fill the anticipated demand for the reason that it takes about five years for the plant to bear seed and about ten to twenty million acres of plantings are believed to be necessary. However, the plant is perennial which will bear seed each year without replanting.

The chemical substance yielded by the seed, and known as sarmentogenin, was originally isolated in 1915 at the Rockefeller Institute for Medical Research by Drs. Walter A. Jacobs and Michael Heidelberger. More recently a group of Swiss chemists, in the laboratory of Professor Tadeus Reichstein, at Basle, also isolated sarmentogenin from the seed.

Efforts to further simplify the chemical process of producing Cortisone must continue if the price for this important material is to be brought within reach of the average sufferer from rheumatoid arthritis. It must be remembered that this drug must be taken continually by those afflicted with this disease just as diabetics must continually take insulin.

THE GOVERNMENT AND DRUGS

THAT a marked change has occurred in medicine in this country is apparent to everyone who even thinks most superficially about the matter. For more than twenty years there has been a rapidly accelerating growth in the manufacture and sale of medicinal agents promoted only through the doctor. This branch of the drug manufacturing industry has risen from a minor position until today it far outstrips the manufacture and sale of products marketed through means of direct advertising to the public. A sharp increase in knowledge of health matters on the part of the general public over the past two decades or more is very largely responsible for this change. Perhaps of equal importance is the sharp increase in the number of specifics now available to the physician as the result of intensive research through the cooperative efforts of the medical schools, clinics, and drug manufacturing institutions and their research laboratories.

Prior to the war, new therapeutic agents, practically without exception, were developed by individual drug manufacturers. This is still the way in which the large majority of products are developed. However, under the stress of the recent war, cooperative efforts on the part of various manufacturers were deemed essential in the development and production of important therapeutic agents. The program for development of production methods and clinical application of penicillin was perhaps the most outstanding example of this type of cooperative effort. The manufacturers willingly polled their knowledge to the end that production was stepped up at the highest possible rate so as to protect the health of the men in the Services.

Since the war, production efforts to produce new products have been carried on individually by manufacturers, but in an increasing number of instances the clinical investigation of a new product has been a cooperative effort financed by all the manufacturers. A typical example of this is streptomycin, the therapeutic evaluation of which was determined in this way. The Vitamin Foundation is, in fact, a similar undertaking for the reason that it is interested only in the application of vitamins to problems of health and well-being.

However, as the result of the Government direction of these cooperative efforts during the war years, and as the result of the increased interest of the Government in the health problems, we find increased attention being given to the development of new important therapeutic agents on the part of the Federal agencies such as the Federal Security Administration and its division, the U. S. Public Health Service, the State Department, the U. S. Department of Agriculture, and others. This fact has come to notice in the recent publicity regarding partial clinical evaluation of Cortisone, or Compound E, and the more recent reports that an unlimited supply of raw material for its production is available from a botanical seed.

The search for a hormone compound which would bring relief to the eight million people in this country who are sufferers from rheumatoid arthritis has been a cooperative effort extending over many years. It was in December 20, 1941 that the National Research Council called an official conference in Washington to discuss adrenocortical hormones. Therefore, this problem was before the manufacturers and clincis of this country during the entire period of our direct involvement in the war. The importance of the fact that solution of the problem could greatly aid us in the war effort was known to all. Therefore the Government and the manufacturers, scientists and doctors represented at the conference realized fully the importance and the urgency of the problem. But no solution was found in time to be of any help in the prosecution of the war. However, the effort continued, and while a synthesis of Compound E, or Cortisone, was discovered by the Merck Research Laboratories in 1946, it was not until late 1948 that sufficient material was available for clinical evaluation.

The synthesis of Cortisone was described by an outstanding organic chemical scientist as the most difficult synthesis he ever saw. The product was made in a synthesis requiring thirty-seven steps with desoxycholic acid obtained from ox-bile as the starting point. In addition to facing such a difficult synthesis, potential producers of the product were also faced with the fact that there is not sufficient of the raw material available to produce anything like adequate supplies. It is estimated that there are eight million cases of rheumatoid arthritis in the country requiring treatment with Cortisone. The required dosage is believed to be one hundred milligrams per day, and the drug

must be taken continually since it does not correct the condition, but completely relieves the symptoms. In other words, it works in a manner similar to Insulin in diabetes, this being another glandular deficiency, the symptoms of which are relieved through use of a hormone.

If one multiplies the 100 milligrams per day, per case, by 8 million for the daily demand for the drug in this one disease in this country, he finds that 800,000 grams, or 800 kilograms per day would be used. Multiplying this by 365 days in a year, we arrive at 292,000 kg., or 642,400 pounds needed annually to treat rheumatoid arthritics. This indeed is a sizable production requirement, especially for a product which is so difficult to make.

But in addition to these requirements, other requirements of great importance might also arise when the drug has been finally evaluated clinically. It is not very firmly believed that the drug shows great promise in the treatment of rheumatic fever, and if this proves to be true, heavy additional supplies will be required to treat the large number of cases of this disease in the country.

However, in addition to finding out what diseases respond to Cortisone and how they should be treated with the drug, manufacturers and physicians are equally interested in determining whether the drug has side effects and how serious they might be. In administering a potent hormone compound, scientists are not certain what effect this will have on the endocrine balance of the system and how a possible imbalance that might be created will affect the patient. It is quite possible that side effects in some instances might prove worse than the disease. With such a question unanswered, and faced not only with a raw material shortage, but also with a synthesis which indicates a cost of production that would keep the drug out of reach a very large percentage of the sufferers needing it, manufacturers can hardly make definite plans to meet the nation's requirements.

Manufacturers interested in the Cortisone project have long since decided that solution of the problem is too much for any of them to handle individually. For this reason, cooperative work is being undertaken at least with reference to the clinical evaluation of the product. Manufacturers producing Cortisone are turning their entire output—which at present is quite meager—to a committee established for the purpose of clinical study of the drug. Because of the fact that there just is not sufficient material being produced to allow of its use by any individuals, no material is being released in any other way than through the committee.

Because of the importance of the problem from a health standpoint, because of the fact that the return to normal activity of the eight million arthritics would be of great economic benefit to the nation, and because of the extreme difficulty of solving the problem, the Government has been in the picture.

Recently a widespread announcement was made that the raw material shortage for the production of Cortisone had been solved. It was stated that a chemical obtained from the seed of strophanthus sarmentosus. This chemical, which has been named sarmentogenin, is said to give Cortisone by a synthesis requiring only twenty steps, as compared with thirty-seven steps in the synthesis from the ox-bile raw material. Furthermore, it was pointed out that unlimited supplies of this raw material could be obtained by cultivating enough plants.

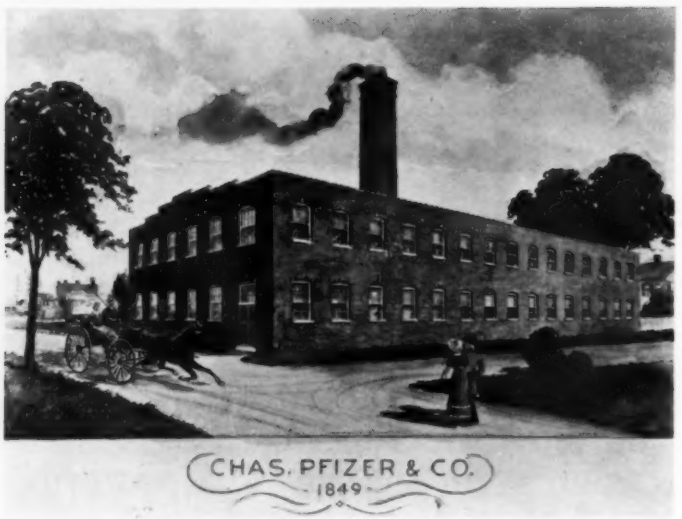
Cortisone—heralded as a "miracle drug" for arthritis, rheumatic fever, and possibly other diseases—is proving to be an extremely difficult product to produce in sufficient quantity. The Government is standing by ready to jump in and give help where needed. But how far will the Government go in this situation, and will this prove to be an example?

Here the Government really got excited. The plant was available in Africa. The Government was not going to let this information out until we had in our hands the seeds, roots, cuttings, and plants from Africa so that we could take immediate steps to cultivate the plant in places that would always be accessible to us. Furthermore, they said that they were not going to have a situation develop in this material similar to the situation which developed in quinine and rubber, two materials originally discovered in South America but developed into monopolies by the Dutch and British, respectively, in Indonesia. However, it was later discovered that the plant grew freely in Liberia, and since American interests are strongly intrenched there, the need for secrecy no longer existed.

The viewpoint of the Government with regard to this development is extremely interesting. Not only were they interested in obtaining raw material for production of the drug, but they were also interested in the economic aspects of such a crop. With no knowledge as to whether the seed will grow and produce the chemical in the parts of the world in which they

(*Continued on page 356*)

A CENTURY OF PFIZER



The building purchased by Charles Pfizer and Charles F. Erhart in 1849 is still in use as part of the site which houses the executive offices, research laboratories, and main production units of the company.

LOOKING forward from one hundred years of progress and growth to a still more important position in the economic fabric of the nation, Chas. Pfizer & Co. pauses briefly to review its century of existence. The company which in the twenties, freed this country from foreign domination of supplies of citric acid by fermenting sugar to obtain unlimited supplies, and became, in the forties, the world leader in the production of penicillin, is a far cry from the partnership which opened a factory in Brooklyn to make santonin, the vermifuge, from wormwood oil.

Today the original manufacturing building at Bartlett Street and Harrison Avenue, Brooklyn, which the distant relatives, Charles Pfizer and Charles F. Erhart bought to launch the partnership of Chas. Pfizer & Co. the year after they arrived in this country from the town of Ludwigsburg in the Kingdom of Wurttemberg, is in use, but is dwarfed by the other buildings which house Pfizer's main offices, laboratories and plant.

Today the company operates three additional plants, all acquired following the close of World War II. The first of these is located on a sixty acre site on the Thames River, Groton, Conn., and is principally devoted to the production of citric acid. The next is the plant of the Citro Chemical Company of America at Maywood, N. J. In 1947, Pfizer purchased all the outstanding stock of this company which manufactured caffeine, acetophenetidin, and acetanilid. At the time of the purchase, Citro had developed a process of caffeine and theophylline production by organic synthesis. Pfizer's long experience in this technique resulted in a commercially successful production method being worked out. The fourth plant of the company, the Virgo plant located at Terre Haute, Indiana, was built by the Government during the war, and was leased from the Government for twenty years in December, 1947. This plant is chiefly concerned with the production of the antibiotics, penicillin and streptomycin.

Pfizer's outstanding accomplishments through the application of fermentation to the production of chemicals, starting with the dramatic announcement that this country was independent of Italy as a source of raw material just as Italy was announcing that no further raw material was to be exported, and reaching its peak in the mass production of penicillin as part of the recent war effort, included much more than just the production of these two products. Noteworthy in this phase of Pfizer's activities is the production of gluconic acid in commercial quantities at reasonable cost. This product, formerly little used because of high price and insufficient supply, has now made an important place for itself in the pharmaceutical industry, the food and beverage field, and in other industries.

Also exceedingly well versed in organic synthesis, Pfizer has become a leading manufacturer of organic chemicals, notably ascorbic acid and other vitamins, as well as synthetic caffeine. Some of the early products manufactured by Pfizer included santonin, iodine preparations, mercurials, borax, refined camphor, and the tartars. Many of these products are still made by Pfizer which has long main-

tained a leading position in production of the tartars, bismuth salts, oxalates, gluconates, mercurials, iodine products, and others. Through the efforts of the company's research and development laboratories the company travels in the van of progress in products which find application in the two principal industries which it serves—the pharmaceutical industry and the food and beverage industry.

The two founders of the business, whose family ties were cemented more closely by the marriage of Mr. Erhart to the sister of Mr. Pfizer, first sold santonin in candy-like cones, the skill of Pfizer as a chemist and of Erhart as a confectioner complementing each other. A short time later they undertook the manufacture of the leading iodine preparations, including potassium iodide, iodine resublimed, and iodoform. Before 1855, the activities of the company included the manufacture of the mercurials such as calomel, corrosive sublimate, the red and white precipitates, and production of borax, boric acid, and refined camphor. With the imposition of a new tariff about 1860, the partners saw an opportunity to capitalize upon their European contacts, and to initiate in this country the manufacture of the tartars which were in growing demand by the food and medicine industries. The production of the refined tartars such as cream of tartar, tartaric acid, and Rochelle salts from crude argols deposited in wine casks during the fermentation of grape juice to produce wine, is still an important Pfizer operation.

After twenty years of existence Chas. Pfizer & Co. had established such an important place for itself in the chemical and drug trade of New York, that in 1868 the firm moved its New York office from the old Beekman Street address to a new building of its own at 81 Maiden Lane. Here the administrative and sales offices were maintained for close to 80 years, being completely moved back to Brooklyn by the end of last year, and the Maiden Lane building being completely turned over to export activities. It was while in this Maiden Lane building that Pfizer became one of the first subscribers of the Bell Telephone Company, predecessor to the New York Telephone Company. Although the first patent on the telephone was granted in 1876, by 1878 the company had issued its first directory. Pfizer was among the 271 subscribers appearing on this single sheet directory.

Dominating the Pfizer scene for a long period of time as general manager, was a man who entered the firm's employ in 1873 and at the age of sixteen was engaged as office boy. This was John Anderson, a man who exhibited such outstanding qualities of intelligence, initiative, and leadership that he could not be overlooked. His talent for salesmanship developed rapidly, and he became one of the company's most successful city salesmen. In 1882 with the sweep toward the West, the company decided to open an office in Chicago, and young John Anderson was chosen to take charge of it. After ten years' seasoning in this territory, Mr. Anderson was brought back to New York as general manager of the company. In 1900, when Charles Pfizer decided to retire from active business, Mr. Anderson became one of the original directors and officers of the corporation which then succeeded the fifty-one year old partnership. Although he was less active in later years, he was chairman of the company's Executive Committee from 1906 until his death in 1940. He was chairman of the Board of Directors from 1914 to 1929.

Another man who entered the employ of the company as an office boy and rose to a position as an officer, was Franklin Black. Mr. Black became office boy in 1875. In 1887 he went to the Chicago office and served under Mr. Anderson. In 1907 he became secretary of the company and, in 1925, treasurer. He continued as treasurer until his death in 1934.

(Continued on page 354)

Ins and Outs of the U. S. P.

ANNOUNCEMENT of the admissions and deletions for U.S.P. IV has been made by the Committee of Revision. The Subcommittee on Scope, consisting of 18 medical members of the Committee of Revision, working with five pharmacists, makes the final decisions on articles for therapeutic or surgical uses to be admitted or dropped from the forthcoming U.S.P. The objective—quoted from the Preface of the first pharmacopoeia of 1820, and still the accepted policy today—is: "to select from among substances which possess medicinal power, those the utility of which is most fully established and best understood; and to form from them preparations and compositions, in which their powers may be exerted to the greatest advantage . . . The value of a Pharmacopoeia depends upon the fidelity with which it conforms to the best state of medical knowledge of the day."

A total of 211 items are being added to U.S.P. IV, while 119 items are being deleted. Surprising as it seems there are again being dropped many items which are very widely used by physicians throughout the country. The deletion of many widely used items and the inclusion of many new items which are not yet as widely used as some of the items which are being dropped, is due to the fact that the physicians making the decisions through their membership on the Subcommittee on Scope are close to the new developments in therapeutics. Therefore these physicians have advance knowledge which they believe allows them to predict ahead of the actual experience of the medical practitioners throughout the country, what drugs are no longer of any real value, new ones of superior value having appeared to replace them. That these predictions are not always accurate is affirmed by the fact that certain items are dropped from one revision of the U. S. P., only to reappear as an addition to a later revision.

Articles Added To U.S.P. XIV

Acacia Syrup
Acetanilid Tablets
Acetic Acid
Acetylsalicylic Acid Capsules
Albumin, Normal Human Serum
Aluminum Acetate Solution
Aluminum Subacetate Solution
Aluminum Sulfate
Aminophylline Suppositories
Ammonium Mandelate Tablets
Amphetamine
Amphetamine Inhalant
Amphetamine Sulfate
Amphetamine Sulfate Tablets
Aureomycin Hydrochloride
Aureomycin Hydrochloride Capsules
Benzyl Benzoate Chlorophenothane Lotion
Biscumarol (Dicumarol)
Biscumarol Capsules
Biscumarol Tablets
Butopyronoxyl (Indalone)
Cacao
Cacao Syrup
Calciferol (Vitamin D_2)
Calcium Gluconate Tablets
Calcium Lactate Tablets
Calcium Mandelate Tablets
Carbarsone Capsules
Carbarsone Suppositories
Carbarsone Tablets
Castor Oil, Sulfated
Cellulose, Oxidized
Cherry Juice
Cherry Syrup
Chloramphenicol (Chloromycetin)
Chloramphenicol Capsules
Chloramphenicol Tablets
Chloroguanide Hydrochloride (Paludrine)
Chloroguanide Hydrochloride Tablets
Chlorophenothane (D.D.T.)
Chloroquine Phosphate
Chloroquine Phosphate Tablets
Chorionic Gonadotrophin
Chorionic Gonadotrophin Injection
Congo Red
Congo Red Injection
7-Dehydrocholesterol, Activated (Vitamin D_3)
Desoxycorticosterone Acetate Injection
Desoxycorticosterone Acetate Pellets
Dihydromorphinone Hydrochloride Injection
Dihydrostreptomycin
Diiodohydroxyquinoline (Diiodoquin)
Diiodohydroxyquinoline Tablets
Dimercaprol (BAL)
Dimercaprol Injection
Dimethyl Phthalate (Insect Repellent Ingredient)
Dimethyl Phthalate Solution, Compound

Diphenhydramine Hydrochloride (Benadryl)
Diphenhydramine Hydrochloride Capsules
Diphtheria Toxoid and Pertussis Vaccine Combined
Ephedrine Hydrochloride Capsules
Ephedrine Hydrochloride Tablets
Ephedrine Sulfate Capsules
Ephedrine Sulfate Injection
Epinephrine in Oil Injection
Epinephrine Bitartrate
Epinephrine Bitartrate Ophthalmic Ointment
Epinephrine Bitartrate Ophthalmic Solution
Ergotamine Tartrate Injection
Estradiol Tablets
Estradiol Benzoate Injection
Estrogenic Substances
Estrogenic Substances Capsules
Estrogenic Substances Injection
Estrogenic Substances Tablets
Estrone Injection
Ethohexadiol
Ferrous Sulfate Syrup
Folic Acid
Folic Acid Capsules
Folic Acid Tablets
Globulin, Antihemophilic (Blood Fraction I)
Heparin Sodium
Heparin Sodium Injection
Homatropine Methylbromide
Homatropine Methylbromide Tablets
Insulin, Globin Zinc, Injection
Iodolphionic Acid (Priodax)
Iodoalphionic Acid Tablets
Iodochlorohydroxyquin (Vioform)
Iodochlorohydroxyquin Powder, Compound
Lactic Acid
Liver with Stomach Capsules
Mannitol Hexanitrate Tablets
Menadione Capsules (in oil)
Menadione Injection
Meperidine Hydrochloride (Demerol Hydrochloride)
Meperidine Hydrochloride Injection
Meperidine Hydrochloride Tablets
Meralluride (Mercuhydrin Sodium)
Meralluride Injection
Mercurophylline
Mercurophylline Tablets
Mercury Ammoniated Ophthalmic Ointment
Mercury Bichloride
Mercury Bichloride Ophthalmic Ointment
Mersalyl and Theophylline Tablets
Methamphetamine Hydrochloride (Desoxyephedrine)
Methiodal Sodium (Skiodan)
Methiodal Sodium Injection
Naphazoline Hydrochloride (Privine Hydrochloride)
Naphazoline Hydrochloride Solution, Mild
Naphazoline Hydrochloride Solution, Strong
Nicotinamide Capsules
Nicotinic Acid Capsules
Nikethamide (Coramine)
Nikethamide Injection
Nitrogen
Ox Bile Extract Capsules
Oxytocin Injection (Pitocin)
Para-aminobenzoic Acid
Para-aminobenzoic Acid Tablets
Paraffin
Penicillin G Potassium (Crystalline)
Penicillin G Sodium (Crystalline)
Penicillin Buffered Crystalline
Penicillin for Inhalation
Penicillin, Procaine
Penicillin, Procaine for Aqueous Injection
Penicillin, Procaine, Oil Injection
Pentaquine Phosphate
Pentaquine Phosphate Tablets
Pentobarbital Sodium Injection
Pentobarbital Sodium, Sterile
Pentylenetetrazol (Metrazol)
Pentylenetetrazol Injection
Pertussis Vaccine
Pertussis Vaccine, Alum Precipitated
Phenobarbital Sodium Injection
Phenobarbital Sodium, Sterile
Phenylephrine Hydrochloride (Neo-Synephrine HCl)
Phenylephrine Hydrochloride Injection
Phenylephrine Hydrochloride Solution
Phthalylsulfathiazole (Sulfathalidine)
Phthalysulfathiazole Tablets
Pilocarpine Hydrochloride
Piperocaine Hydrochloride (Metycaine Hydrochloride)
Piperocaine Hydrochloride Injection
Polyethylene Glycol 400
Polyethylene Glycol 4000 (Carbowar 4000)
Polyethylene Glycol 400 Monostearate
Polyethylene Glycol Ointment
Polysorbate 80 (Tween 80)
Potassium Nitrate
Procaine Hydrochloride Injection
Procaine Hydrochloride and Epinephrine Injection
Procaine Hydrochloride, Sterile
Progesterone Injection
Propylene Glycol
Propylthiouracil
Propylthiouracil Tablets
Protein Hydrolysate Injection
Quinidine Sulfate Capsules
Quinine Sulfate Capsules
Raspberry Juice
Raspberry Syrup
Rose Water Ointment, Petrolatum
Salicylic Acid Plaster
Scopolamine Hydrobromide Tablets
Serum, Anti-A Blood Grouping
Serum, Anti-B Blood Grouping
Serum, Anti Rh Typing
Silver Nitrate Ophthalmic Solution
Sodium Bicarbonate Tablets
Sodium Bisulfite
Sodium Iodomethamate (Neo-Iopax)

(Continued on page 346)

RUTH HUSSEY—COURTESY M. G. M.

CONTROL SYSTEMS IN

By HARRY HILFER

MAINTAINING a control on finished materials is perhaps the most difficult task assigned to the laboratory. This is particularly true of emulsions whose physical properties are subject to greater changes with age than are the more simple physical mixtures. For example, a face powder, if properly formulated and tested by the development laboratory will have a definite shade, particle size range and apparent specific gravity when made, and these constants will continue to hold, no matter how old the sample becomes. Changes, if any, will be noticed in the odor characteristics of the powder, a variable which will be present in any preparation made. An emulsion on the other hand may follow a viscosity curve during which a decrease or increase in viscosity will be noticed as time goes on. Invariably the preparation when freshly made will look and behave the same as previous batches, but the alteration of any of a number of manufacturing conditions may cause a batch to deviate from the normal expected viscosity. The obvious and safest answer would be to allow the batch to age the normal time interval so that the normal changes could take place and then proceed with packaging if the conditions of the control are satisfactory. Such a method however is costly, because of the non-productive tank space and other handling consumed.

Methods of proper control in preparations of this type must, therefore, depend on the individual eccentricities of the preparation and the chemists familiarity with the vagaries of the preparation. In addition, stability tests could be standardized upon, where the properties of the emulsion at a definite interval after manufacture should be the same. Subjecting the sample to the centrifuge at a constant speed for a constant time interval is one of the methods suggested, as are viscosity determinations and pH readings.

Most emulsion preparations will have variable pH readings for perhaps a few days after manufacture. If the preparation is properly formulated, the pH will finally remain the same perhaps within a week after its manufacture and not vary from there, thereafter. I have found this to be particularly true in cream shampoos, which have a tendency towards "pearling." There is a sharp drop in the pH after the "pearling" has taken place. However, the curve should be the same and the pH at any definite time after processing should be the same.

The greatest variable encountered in a manufacturing operation is in the atmospheric temperatures met with.

Changes in the emulsion, which normally take place, are frequently influenced by the cooling rate it is subjected to. This is particularly true of hand lotions and shampoos. If water is depended upon to effect the cooling of the preparation inside the tank, the cooling period will vary with the temperature of the water supply. The chemist must recognize these conditions and therefore allow in his examination for possible deviations because of these largely, uncontrolled, external conditions. Generally speaking, deviations caused by the temperature variations and cooling period differences do not noticeably affect the final physical properties of the preparation, though the period it would take to reach its final state would vary.

Much of the same conditions are attached to the control of cold creams. In most formulations allowance is made for a "hot fill" with consequences setting up to proper hardness. The stiffness of the cream is dependent on the temperature at which it is filled into jars and the rate at which it will cool in the jar. Generally speaking, the greater the difference between pouring temperature and room temperature, the stiffer would be the cream. If the pouring temperature is kept constant, this variation would never be the same, and certainly with the high temperatures experienced during this past summer, the variation from normal would be so great that the creams would hardly re-

IS IN COSMETIC LABORATORIES

semble each other. A compensation may be made by raising the forming temperature, but this cannot be raised too high since it may interfere with normal and satisfactory manufacturing procedure. Unless other processes are used, such as viscolization, a variation in stiffness must therefore be expected as a result.

In his control system the chemist, therefore, must set up a set of standards which are flexible enough to take care of these variations. Improper stirring or variations in stirring procedure may cause part of the cream to invert to a water-in-oil emulsion or vice-versa. It would, therefore, be possible to have both the water-in-oil and oil-in-water phases present in the same cream. This should be avoided since the cream would become rather unstable as a result. This can be recognized by rubbing a sample between two spatulae and if a mixed phase emulsion is present, it will be evidenced by a rather rough appearing film.

The non-colloidal preparations are easier to control, since none of the deviations found in emulsions are present here. In examination of a liquid deodorant antiperspirant, the presence and amount of the active ingredient can be made quickly by regular quantitative methods. In other preparations which are aqueous or alcoholic solutions, a check on the non-volatile fatal is somewhat positive since any error in manufacture would be caught at this point. In shampoos the standard methods for forming may be employed or direct titration of the active ingredients. In the case of sulfated alcohols this may be accomplished by direct hydrolysis and titration of liberated $NaHSO_4$ or by titration with a standardized cationic agent.

Lipsticks may be easily checked for shades and their melting point determination if the same is good assurance that the mass is constant. Here again, however, a "setting up" period must be allowed before the melting point becomes constant.

Pressed powder, such as rouge or pressed face powder, is somewhat more difficult to control since there may be a variation in pressure used from piece to piece. No matter how rigid a control is exercised here, there may be a few pieces slipping by for this reason. It is, therefore, advisable for the manufacturer to use presses which work under an hydraulic constant pressure of air constant pressure system, rather than by the usual press which forces the die down on the pan a definite distance and is dependent on constant pressure by the constant weight of the material in the pan. In this latter system the variations of powder in the pan could easily lead to variations in the "pay-off" properties of the finished material, and unfortunately since all control systems are based on representative samples, procurement of a representative sample in such a case may be almost impossible.

The general methods suggested above are dependent on several factors. Primarily that production and laboratory work be in close liason, so that if a batch during manufacture shows a deviation from the norm, the laboratory and production departments may work together and that the laboratory be familiar with the formulations employed. There can be no fool-proof, convenient, control system unless the outlined conditions are presupposed.

Control of materials made by an outside source is difficult unless complete faith can be placed in his efficiency and honesty. Control systems are designed to find an obvious error either in manufacturing procedure or addition of ingredients. Deliberate substitutions, however, could be made where no control system could uncover, particularly if the formula is unknown to the control man.

EWING GALLOWAY

THE COMMON COLD

By MILTON A. LESSER

WHAT is the most frequent disease that affects man? In spite of its frequent occurrence, what disease has received much less attention than many other common illnesses? What disease is marked by a lack of knowledge concerning its cause and treatment? You guessed it—the common cold!

Doctors admit their helplessness before this all too familiar illness. For example, Adler[1] has acknowledged that a feeling of futility still confronts the physician when he is called to the bedside of a patient with a common cold. He is well aware that he does not yet possess a proper therapeutic agent or a therapeutic procedure more effective than bed rest.

Of course there are numerous data on the frequency and cost of the common cold. Perhaps the most indicative are the figures presented by the statisticians of the Metropolitan Life Insurance Company.[2] They have come up with the estimate that the cost of the common

cold to the American people is well over one billion dollars per year!

Their calculations, by which they arrived at this appalling figure, run somewhat as follows: The average person suffers at least two colds a year or about 300 million annually for the entire country. On an average, each cold lasts for five days, giving a total of one and one half billion days of discomfort, decreased efficiency, or disability. It is conservatively estimated that the time lost from work is one day per employee per year, or more than 60 million days lost in industry from this cause. Even at a low average of $7.00 per day, the cost in lost wages alone is more than 428 million dollars annually. Although it is impossible to arrive at exact figures, it is estimated that the average family spends about $10.00 a year on cold treatments, making a total of about 400 million dollars. No attempt was made to reckon the cost to industry resulting from the loss of production and disrupted routine, but there is no doubt that it must reach a considerable figure for the country as a whole.

Colds, of course, affect both youngsters and adults. As noted by Diehl,[3] colds represent the largest single cause of school absenteeism at various age levels. The incidence of colds in the United States varies throughout the year, but there are three main peaks of incidence each year. The first is in January and February, the second in April and May, and the third in September and October. The epidemic occurring in the spring tends to be the mildest, while that appearing in January and February is the most serious as measured by absence from work and severe complications.[4]

Smith[5] has said that common colds and their complications comprise the greater part of medical practice, adult as well as pediatric. It is remarked by Fabricant[6] that while the common cold is rarely a direct cause of death, it precedes or incites serious infections, such as bacterial pneumonias, subacute bacterial endocarditis, septicemia, and meningitis. It frequently precipitates the symptoms of coronary occlusion, peptic ulcer and other diverse diseases.

It is an all too familiar fact that the common cold is marked by a group of unpleasant symptoms. This is borne out by the definition of the common cold which is usually described[7] as "a mild, self-limited, afebrile respiratory illness, characterized by catarrhal inflammation of the mucous membranes of the nose, the sinuses and contiguous structures of the upper respiratory passages." Diagnostically, the outstanding features of a cold are coryza, lacrimation, a dry and scratchy throat, an irritative cough, swollen and congested nasal mucous membranes. However, there is considerable variation in symptoms not only in different individuals, but in the same individual at different times.

Although all workers do not accept this view, most investigators believe that a virus is responsible for the common cold. There is considerable evidence[8] to back up the concept that a filterable virus is the etiological factor in this condition. However, there are a number of points which must be cleared up before this theory can be fully accepted. In Dingle's[7] opinion further investigations are necessary to determine whether or not single or multiple agents are involved, to evaluate more fully the apparent lack of active immunity, and to develop specific diagnostic tests. Hilding[9] has also stressed that the relationship between the cold virus and the pathogenic bacteria, or the so-called secondary invaders, is not clear.

The answer to these and other questions may be answered in work[10] now being done at the Harvard Hospital in England. Here human volunteers of both sexes are serving as subjects for the carefully controlled studies being carried out by teams of experts. Some valuable data has already been obtained, but so far it has not been possible to cultivate the "cold" virus outside the body. Nor has the stage been reached where it can be handled freely in the laboratory and observed by the electron microscope.

While it is generally assumed that a virus is responsible for most colds occurring in epidemic form, Fabricant[6] points out that small outbreaks are sometimes caused by microorganisms capable of invading the healthy mucous membrane in the absence of a concurrent virus infection. In contrast is the view that the virus operates only in a minority of colds. Brown,[11] for example, cites evidence which points to a hemolytic streptococcus as the etiological factor in the great proportion of cases.

There is another group of workers who, like Adler,[1] ask if an organism is always the primary offending agent. Indicative are the views expressed by Smith[5] in his discussion of the precipitating causes of the common cold. He notes that direct contact with an acute infection or possibly with a carrier of an infecting agent is responsible for many colds. However, not all colds can be traced to such sources and many people become ill without discoverable contact. Hence, in his opinion, factors which lower the resistance of the individual are as important an infectious contact, for with lowered resistance the organisms which are always present in the nose and throat easily become active.

This authority, like many others, stresses the role played by chilling in precipitating colds. "Chilling," says he, "is perhaps the most frequent direct cause of colds." He notes that respiratory infections are called "colds" because they regularly follow chilling. Cold weather is dangerous for this reason, especially when accompanied by high winds. However, over-heated houses are also responsible for many respiratory infections. This is due to the fact that the hot air dries out the mucous membranes and the heat causes the individual to perspire. Any moving current of air may then produce chilling and bring on a cold.

Other elements may enter the picture. Many workers stress the causative roles played by such factors as physical and mental fatigue, overeating or the ingestion of indigestible or improper foods, constipation, anatomic defects (e.g. septal deviation, adenoids or enlarged tonsils), the presence of foci of infection, con-

stitutional illness or debility, dietary deficiencies, and emotional disturbances.

Recent years have seen increased attention being given to the ways in which colds are spread. It has long been obvious that crowding in cities, in buildings, in schools, in vehicles and in other places greatly increases contact and the opportunities for the transfer of infecting agents. Newer data, however, has caused a shift in many of the older views concerning the manner in which these agents are circulated. Even opinions concerning crowding may have to be revised. As remarked by Andrewes[12] in England, crowding can hardly be all important, otherwise why do not colds spread in rush hours in trains during July?

It has also been learned that germ-laden handkerchiefs and bacteria-bearing clothing are very important elements in the spread of respiratory infactions. Thus, in the experimental studies of Duguid and Wallace,[13] two persons known to be harboring *Staphylococcus aureus* were isolated in a small, sterile room. From 840 cubic feet of air contaminated by their sneezes (42 in all) only 16 droplet nuclei carrying staphylococci were recovered. In contrast, 124 dust particles carrying these organisms were recovered from 150 cubic feet of air contaminated from clothing and skin by vigorous bodily activity for 150 minutes.

Handkerchiefs used in the later stages of colds were found to be particularly effective as germ distributors. Current investigations suggest that impregnation of handkerchiefs with a disinfectant might make them much less dangerous in this respect. Such studies also pointed to the great advantage bacteriologically of using disposable paper tissues in controlling the spread of colds and other respiratory infections.

Studies reported by Hamburger and Robertson[14] have revealed that nasal carriers frequently discharged hundreds of millions of hemolytic streptococci into handkerchiefs when blowing their noses. Sneezing expelled far fewer; the output of single sneezes of throat carriers ranging from zero to 106,000 and of nasal carriers from none to 50 million. Most coughs were entirely free of these bacteria, although rare coughs dispersed from 40,000 to 50,000. Thus it appears that the number of hemolytic streptococci propelled directly into the air in either heavy or light droplets might be much smaller than the number collected by a handkerchief held over the mouth.

Further studies along these lines have been very revealing. Dumbell and his associates[15] have found, for example, that an average of 15,000 infected particles may be distributed into the atmosphere by the gentle manipulation of a dry used handkerchief. They also observed that, once airborne, these bacteria-carrying particles are almost completely resistant to the best available aerial disinfectants and to ultra-violet rays at normal humidities. Because the normal use of the handkerchief is more common than sneezing, these workers suggest that it is probably the most important single action, except bed-making, in causing contamination of the air with organisms from the respiratory tract.

This naturally brings to the fore the many studies on methods for treating the air to cut down the spread of the airborne organisms that cause colds and other respiratory infections. These researches have followed three main paths, namely ultra-violet irradiation, the use of disinfectant mists or aerosols and the oiling of bedding and floors.[16] Despite many reports of good results already published, there are those who feel that such methods must be further evaluated before their true worth in controlling the spread of colds can be determined.

Thus in his recent review on the control of airborne infections, Klarmann[17] has noted with respect to germicidal ultra-violet radiation that its effectiveness decreases with increasing humidity above the range of 55 to 60 per cent. Such radiation is more active against the smallest particles, like droplet nuclei, than against the larger particles which may consist of infected dust or lint. These last may provide a protective cover that is impermeable to the bactericidal wave lengths. In addition, this kind of radiation is damaging to the skin and to the conjunctiaae, hence care is needed in the installation and operation of the lamps. Such installations were found to perform particularly well in operating rooms. While favorable results were observed in controlled school installations, the extent to which the method should be carried out is still uncertain.

More enthusiastic is the view expressed by Pulvertaft.[18] In his opinion, ultra-violet light is the simplest and most efficient technic for air sterilization, and has no objectionable features if the eyes and skin are not irradiated. Other observers[19,20] have also stated that worthwhile benefits can be obtained through the use of ultra-violet irradiations.

A less optimistic note is struck by Fabricant[6] who points to studies which cast doubt on the hope that colds or other respiratory ills can be banished by such measures as ultra-violet light. This view is further substantiated by the work of du Buy and his associates.[21] In a controlled study covering a period of six years and involving some 400 individuals, they observed that ultra-violet irradiation caused no significant decrease in the incidence of the common cold and similar infectious diseases of the upper respiratory tract. In view of these findings it is not surprising that they should question the value of ultra-violet installations for the general population.

There have been a number of favorable reports[22,23] on the value of germicidal vapors and aerosols for the reduction of colds and other respiratory ills. Currently, most attention is being focused on germicidal vapors. According to Klarmann,[17] of all the materials studied, triethylene glycol vapor appears to be most satisfactory because of its comparatively greater germicidal and virucidal effectiveness, its low toxicity and corrosiveness and its freedom from odors. Displaying advantages over ultra-violet radiation, its greater utilization must await the development of practical means for producing and controlling vaporization.

(*Continued on page 349*)

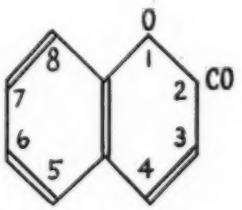
METHYL COUMARINS

By FRANCES S. STERRETT, Ph.D.

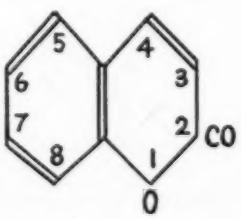
A Contribution of the Research Laboratories of
Fritzsche Brothers, Inc., New York

THIS paper will describe an investigation in the course of which all of the six possible monosubstituted methyl coumarins were prepared, for the purpose of determining their odor character and their utility in flavor compounds. It will be shown that the odor values of the six methyl coumarins obtained do not agree with those reported by A. Angeli and A. Poverini.[1] cf. also M. Guillot.[2]

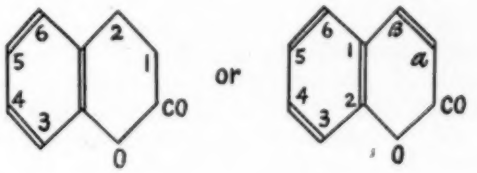
Before describing the preparation and properties of these methyl coumarins, their nomenclature will be discussed, in order to avoid some of the confusion which might result from a study of the literature on the subject. There are several ways of numbering the carbon atoms of the coumarin ring to indicate the position of the radical (here the methyl group) substituted for the hydrogen atom in the ring. For example, according to the nomenclature employed by *Chemical Abstracts* and by A. M. Patterson and L. T. Capell in their work "The Ring Index," the coumarin ring is numbered as follows:



In Beilstein's "Handbuch der Organischen Chemie" (as well as in some other American and British books and articles) the C-atoms of the coumarin ring have the same numbers, but the numbering in the structural formula presented is counter clockwise:



In some French and German Journals (see: F. Peters and H. Simonis;[3] H. von Pechmann and E. von Kraff;[4] P. Chuit and F. Bolsing;[5] T. Posner and R. Hess)[6] the numbering of the carbon atoms in the coumarin ring appears to be based upon that of cinnamic acid:

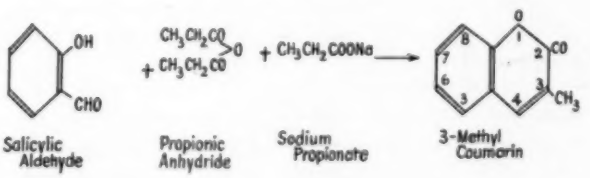


For example: 3-methyl coumarin (*Chemical Abstracts* nomenclature) may also be called α-methyl coumarin or 1-methyl coumarin. Or 8-methyl coumarin (*Chemical Abstracts* nomenclature) may also be called 3-methyl coumarin, (following the cinnamic acid nomenclature system).

To avoid confusion the nomenclature employed by the *Chemical Abstracts* will be used here.

In the present investigation the yield of the methyl coumarins prepared was not considered important, since the primary purpose of the work was the preparation in a state of high purity of genuine samples of each of the six methyl coumarins.

3-*methyl coumarin* was prepared according to the classical synthesis of W. H. Perkin[7] from salicylic aldehyde, sodium propionate and propionic anhydride:

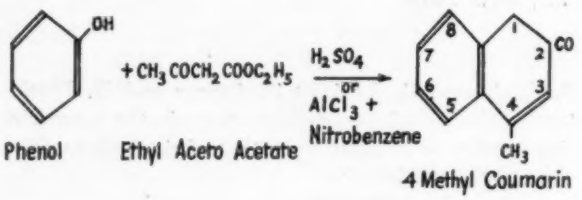


3-methyl coumarin may also be prepared, according to H. Simonis,[8] by condensing phenol and β-methyl malic acid in absolute alcohol with concentrated sulfuric acid in the cold.

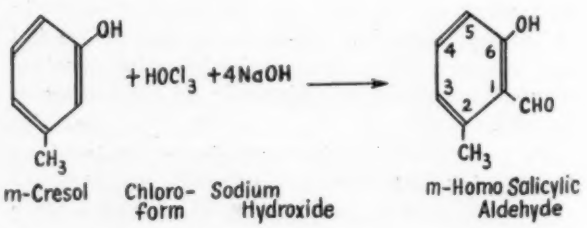
4-*methyl coumarin* was prepared by the condensation of phenol with ethyl acetoacetate. In order to obtain a sample free from by-note resulting from impurities, two experiments were carried out using different con-

densation agents. The two agents produced widely different yields. In one experiment sulfuric acid (73%; d = 1.655) was used as condensation agent; this method was described by F. Peters and H. Simonis.[3] For the other experiment the method reported by E. A. Woodruff[9] was employed. In this procedure aluminum chloride was used as condensation agent, and nitrobenzene (oil mirbane) as solvent.

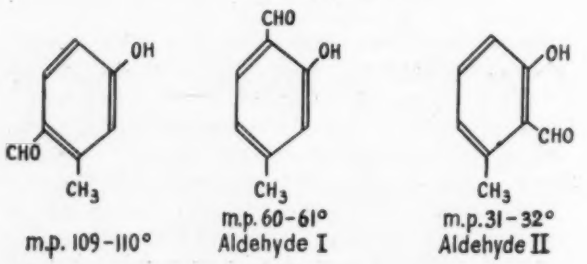
The yield from the second method was approximately 50% higher than that from the first method. There was no by-note of nitrobenzene after recrystallization.



5-methyl coumarin. In order to obtain this methyl coumarin it was necessary first to prepare *m*-homo salicylic aldehyde (2-methyl 6-hydroxy-benzaldehyde). This aldehyde was prepared via the Reimer-Tiemann reaction, from *m*-cresol and chloroform in strong alkaline solution (F. Tiemann and C. Schotten[10]).



In this reaction the aldehyde group may be attached either in the *ortho* or *para* position, relative to the hydroxy group. Thus the reaction yields three aldehydes:

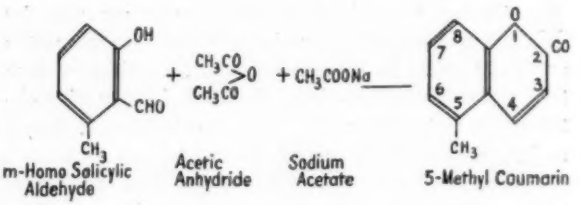


Aldehyde II had to be separated from the mixture of these three aldehydes. Aldehyde I and II were steam distillable, whereas the third aldehyde remained in the residual mixture in the distilling flask. Separation of Aldehydes I and II was effected by the procedure described by O. Anselmino,[11] i.e. by preparation of the reaction products of the aldehydes with aniline. The separation of the aldehydes via these reaction products is comparatively easy, since one reaction product (that of Aldehyde II) is a liquid at room temperature and the other (that of Aldehyde I) is an orange crystalline solid, melting at 92-93°.

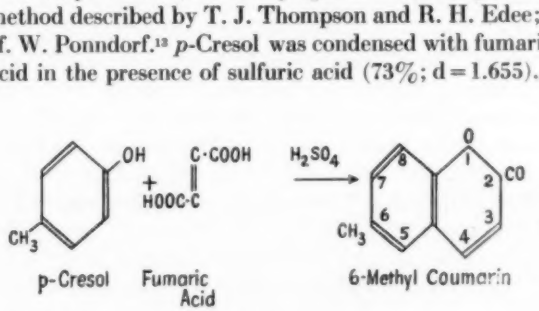
The aldehydes can be regenerated from the reaction product with aniline, by acidification with hydrochloric acid and extraction with ether. The yield of Aldehyde II was very small.

With this *m*-homo salicylic aldehyde (Aldehyde II) a Perkin synthesis was carried out, as described by P. Chuit and F. Bolsing.[5]

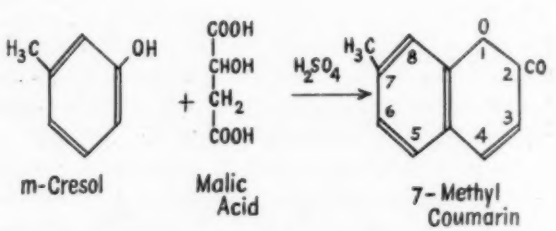
Aldehyde II was condensed with sodium acetate and acetic anhydride to form 5-methyl coumarin. The yield of the last was very small.



6-methyl coumarin was prepared according to a method described by T. J. Thompson and R. H. Edee;[12] cf. W. Ponndorf.[13] *p*-Cresol was condensed with fumaric acid in the presence of sulfuric acid (73%; d = 1.655).



7-methyl coumarin was prepared by a method similar to that of T. Posner and R. Hess.[6] *m*-Cresol was condensed with malic acid in the presence of 73% sulfuric acid (d = 1.655).



To verify the identity and purity of 7-methyl coumarin, a second experiment was carried out. 7-methyl coumarin was prepared via Perkin's synthesis, by condensing *m*-homo salicylic aldehyde with acetic anhydride and sodium acetate. *m*-Homo salicylic aldehyde had previously been prepared by the Reimer-

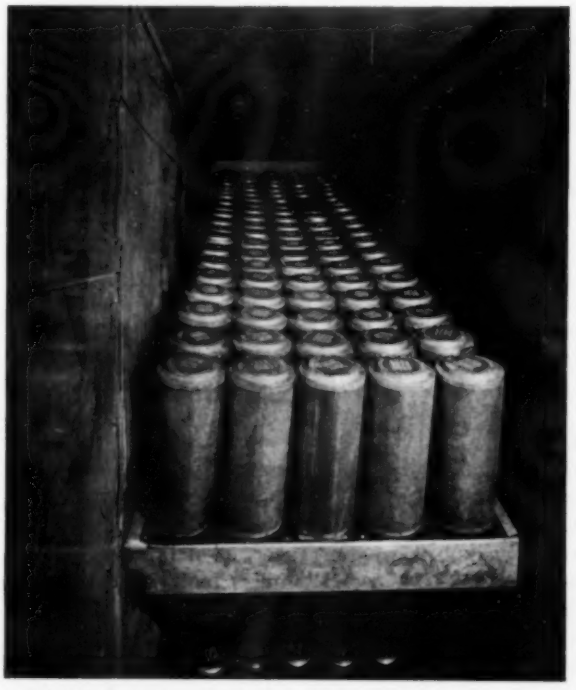
(Continued on page 338)

CONTROL OF ODORS IN PROCESSING

SMELLS are usually an inevitable and oftentimes unwelcome by-product of chemical and pharmaceutical plants and getting rid of them is not always a simple matter of ventilation. More than being a mere nuisance, some process fumes and gases actually constitute a hazard for other products which may be odor-sensitive; also personnel and neighbors.

A number of plants have found activated carbon "air recovery" units a practical answer to such problems. By contrast with other methods of cleansing the air of odors, soaking them up with activated carbon is extremely efficient and practical. In essence, it is simply an industrial and commercial counterpart of the gas mask, relying on the same physio-chemical phenomenon of adsorption.

Merck & Co., in one of their vitamin processing plants, discovered that air purity was as essential as temperature and humidity control. The chemical manufacturing that is going on in the surrounding area makes it inevitable that extraneous fumes will be drawn in through the conditioning system's air intake, which could cause discoloration, "off" flavor and conceivably a reaction altering the compound's stability. As a safeguard against such costly contingencies all the intake air and the system's return or recirculated air must traverse a bank of canisters containing granular activated carbon which effectively takes out any impurities it may contain.



Installed in duct, four hundred canisters, each with a capacity of 25 cubic feet of air per minute, supply 10,000 cubic feet of fresh, odor-free air per minute.

Another efficient use of this method of air purification is in plant exhausts. Organics, Inc., Chicago, manufacture sex hormones from pregnant mares urine. The extraction process is carried on under a carefully hooded area so that the fumes may be collected and carried out of the building. The odor is predominantly urine combined with phenol, trichlorethylene which is used in the process, and capryl and ortyl alcohols. These persistent and obnoxious odors, once released to the surrounding atmosphere, created a unusually offensive nuisance, all the more serious as the plant is located in a residential neighborhood. The Organics Company, confronted with either moving their plant or removing the odors, installed these "gas masks" across the exhaust air duct in order to trap the odors before they could escape. Several other hormone plants having similar processes solved their exhaust problems in the same manner.

The Savoy Drug & Chemical Co., also in Chicago, maintain air purity in their tablet finishing room. Between the compressing operation and final packaging, the tablets are susceptible to foreign odors that may invade the area from other sections of the plant. A blower continuously draws the room air through a gas-adsorbing unit which reduces the odor level below the danger level.

Absolute freedom from odors is often essential where compressed air agitation is employed for mixing certain foods and drugs. Even oil vapors from the compressing machinery can be carried into the mixture, hurting the product's taste or aroma. A specially designed activated carbon filter, fitted into the pipe line, makes an effective barrier.

Chemists and blenders in essential oil and perfumery plants, surrounded on all sides by a confusion of scents, frequently find it difficult to get a true evaluation of a particular essence. A small booth, about the size of a telephone booth, with a purification unit on the outside, which completely cleanses the air within, provides the chemist with virtually mountain-top atmosphere in which to take samplings and make comparisons.

Animal laboratories are important adjuncts in many pharmaceutical and drug plants. By their very nature they are considerable odor producers. One such research laboratory in Chicago, rather than exhaust the air to the outdoors, saved the heating and cooling energy invested in it by recirculating it throughout the plant, but only after it has passed through a puri-

(*Continued on page 356*)

COMPENSATION FOR SALESMEN

By R. A. ANDERSON*

A WELL-PLANNED compensation and expense set up will result in an aggressive, highly effective, satisfied sales force. However, no matter how well-planned a compensation and expense set-up is, it will not relieve management of the necessity of establishing an adequate price and discount structure, a thorough sales training program and a distribution policy that will make up an efficient marketing organization. Further, it will not substitute for sound sales management.

There are three major methods of compensating salesmen: straight salary, straight commission, salary and commission. There are few plans today which do not fall into one of these three categories, the major trend being toward the salary plus commission type of remuneration plan.

Under a straight salary plan a steady income is assured the salesman, thus increasing his financial security. If he is expected to perform a substantial number of non-selling activities, he is not resentful since his income is maintained. It is easier for management to control his activities, and it is a simple plan to administer from the standpoint of accounting. On the other hand, there is no direct incentive for the salesman to put forth special effort on any task. A straight salary plan lacks the flexibility necessary to maintain a varied sales program in high gear, and it may result in an increase in direct selling cost as salaries are raised.

The second plan of remuneration is that of straight commission. This method of compensation establishes complete control of salaries and expenses, and keeps the sales cost ratio at a minimum. It provides the maximum incentive and rewards salesmen in direct relation to their selling results. Also a salesman under this plan necessarily spends his time developing sales volume in those lines returning the largest commissions as a whole. Conversely the straight commission plan results in unstable earnings for the salesman. Control of the force may be very limited, and non-selling activities, which are a very necessary part of pharmaceutical sales work, are neglected because the salesman feels he cannot afford it. Territories may be high-spotted rather than worked, and concentration of selling being on those products which are easiest to sell. Finally and most important, service to the customer before and after the sales is often neglected.

We now come to what is apparently the most frequently used and most effective method of remunerating salesmen for their activities, the plan of salary plus incentive, the incentive being paid either as a bonus or commission. This plan combines the advantages and some of the disadvantages of straight salary and straight commission, but the disadvantages can largely be offset by wise selection of tasks upon which the incentive is based and by proper administration. One very great danger in this type of plan is that some firms have made their plans so complicated, the salesmen cannot understand them. Obviously any plan which will be adequate in the long run must be mechanically workable and must be one under which the salesman knows what is expected of him and where he stands at all times. We must know what we want to accomplish as a selling organization before we can set up a method of compensation to help us attain that accomplishment.

One other type of compensation has received a certain

* Vice-president, Bristol Laboratories, Inc. Delivered before the American Pharmaceutical Manufacturers Association.

The three methods of compensation---straight salary, salary and commission, and straight commissions---are set forth with their advantages and disadvantages to both the salesmen and manufacturers of this industry. PHOTO EWING GALLOWAY

amount of attention recently, namely a profit sharing plan. This method has the advantage of emphasizing profits rather than sales volume alone, and it also affords the salesman a chance to be more or less in business for himself. However, the same problem of controlling the sales force arises here as it does with straight commissions, and also it is difficult to get non-selling activities performed. Probably the most serious objection to profit sharing as a means of compensating salesmen lies, I believe, in the fact that too many of the features which go to make up profit lie outside the salesman's work and cannot be controlled by him. The basis of any incentive type of compensation plan should be that the salesman is rewarded according to how he p e r f o r m s tasks over which he has direct control. If he is doing the job expected of him, he should not be made to suffer financially because of circumstances which he can do nothing to influence. In employing a salary plus incentive plan which, as stated previously, is perhaps the most popular and most effective, the tendency today is to pay this commission or bonus only on volume over an established quota, a salary being charged against the quota.

A great many articles have been written on the evils of quotas, but the experience of a large segment of our industry has shown that if we fairly and equitably set quotas, they can assert a stabilizing influence on the sales picture and yet not be resented by the sales force.

Additional bonuses may be paid for a great variety of tasks which management wishes to be accomplished by the salesmen. Among them are sales of particular products, promotional efforts, sales to specific types of accounts, missionary work and any other specific type of activity which may be deemed necessary. Bonuses can be used to increase the number of calls, number of new accounts and many other similar matters. It is this feature of flexibility which I feel to be one of the very important advantages of a salary plus incentive plan. Rather than complicate our basic compensation plan with too many of these activities, we have found that the use of contests for this problem is more satisfactory.

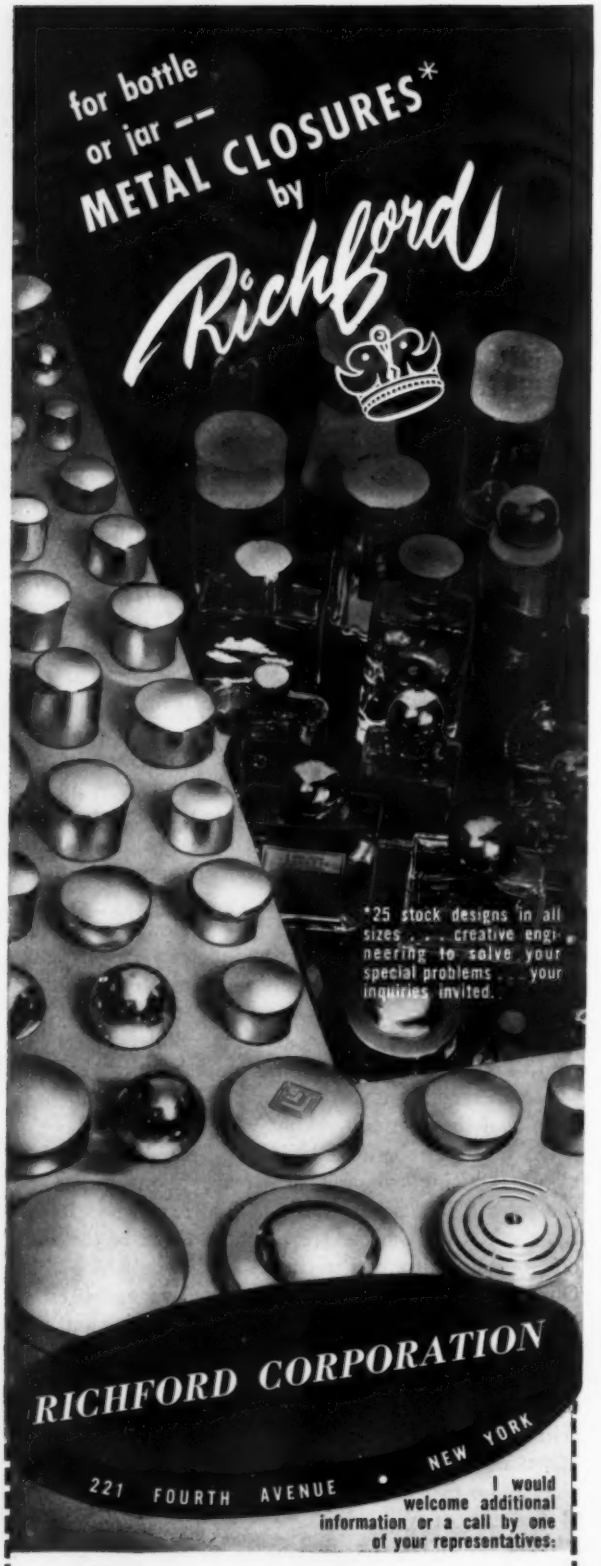
The next important thing to consider is the matter of expenses and their administration. All of us have scrutinized very carefully the expense reports being sent in these days by our salesmen. Those of us who have stayed rather close to the fire during the past few years may find some of the expenses listed today a little hard to swallow. However, numerous surveys point out that the cost of keeping a salesman in the field now is nearly 50 per cent higher than it was before the war. It has been shown that it costs almost $12.00 a day to support a man in a large city and over $9.00 a day in a small city.

There is no doubt that we must review our expense policies and the results of those policies very carefully, and we must examine closely such matters as hotel expenses, entertainment, and so forth. Some of us were lax during the war and immediately after, in controlling these items and we must be sure that our salesmen realize they are being checked and will hear from us if they get out of line.

On the other hand, I believe we should worry less about reducing expenses and more about increasing the sales we accomplish with those expenses. It has been said that the most important thing is the high cost of *not* selling rather than the high cost of selling. Our emphasis should be on the positive approach of building volume rather than on the negative outlook of simply cutting expenses. It is entirely possible that selling expense in 1949 might be the highest ever; nevertheless, our chief worry should be the ratio of selling expense to sales rather than the expense alone. If we increase our sales volume, there can be no doubt that dollar expenses will also increase but we hope at a slower rate.

Selective selling can do a great deal toward keeping the sales-cost ratio in line. Direct your salesmen's efforts at the best sources of business, route your men in the most economical manner and be sure that every territory has the potential volume to give the salesman

(*Continued on page 334*)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RICHFORD BOTTLE & CLOSURE NEWS—

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BEAUTY HINTS FOR STOCK BOTTLES

The altogether satisfactory Carr · Lowery Bottle (left) gets new sales oomph when topped by a Richford designed metal closure.

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SPILL-PROOF MIRACLE FOR SALE

Thanks to capillary action, flush styled caps, and fanatically careful workmanship, Richford spill-proof bottles are JUST THAT. Take off the cap, set it upside down. Not even a suspicion of dew forms below. These are exclusive with us.

SALES SLIPPING?

Are your best numbers joining the flop parade? Give them one more chance with a re-do by Richford. Rich looking (yet inexpensive) Richford closures have smoothed the wrinkles from many a sales managers face. Our special caps for Sachet and Cologne containers are particularly worth investigating.

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PACKAGING AND SELLING

RETAIL DILUTION

THE return of a critical attitude toward the distribution policy of certain manufacturers by a limited number of large retail interests or retail groups is one of those things which we should expect and which manufacturers should anticipate during this part of the business cycle. This criticism by retailers originates partly because certain large and competent retailers believe that they are doing the kind of selling job that materially adds to a manufacturer's reputation and recognition, and also because they believe that the kind of competent selling which they are doing should be restricted as much as possible to products which will build a continuing clientele for their own store.

Another basis for this criticism is, of course, inspired by fear of another kind of retail competition and by the wholely natural desire of certain retail groups to continue as the exclusive retail outlet for certain kinds of products.

A deep antagonism has existed for many years, over certain classes of prestige merchandise, between the department store and the chain store. Not all department stores feel this way, and not all chain stores are the basis of their antagonism. But in the last several years a number of the drug chains have attempted to expand their cosmetic business. They have realized that a substantial increase in cosmetic traffic could only be based upon a recognition of the chain by leading prestige cosmetic and perfume manufacturers. This chain effort to sell prestige cosmetics has brought this feeling of antagonism by many department stores very much into the open.

About 20 years ago many independent druggists bitterly resented what they considered was the intrusion of variety stores into the cosmetic and toilet preparation business. At this time manufacturers, by and large, soothed the independent druggists by stating that the variety store was largely used as a basis for mass sampling, and that it would in fact increase the toilet preparation and cosmetic business of the independent drug store.

During most of these intervening years, consumption of cosmetics increased so rapidly that this issue was largely forgotten.

Now the invasion of the super-market poses a very real problem which will bring many headaches to sales managers, and poses some very difficult policy problems, and perhaps will arouse a good deal of resentment which may result in some specific action by other retail groups. The basic question which has not been posed and which may have to be answered some day is this—Can an industry have too many retailers?

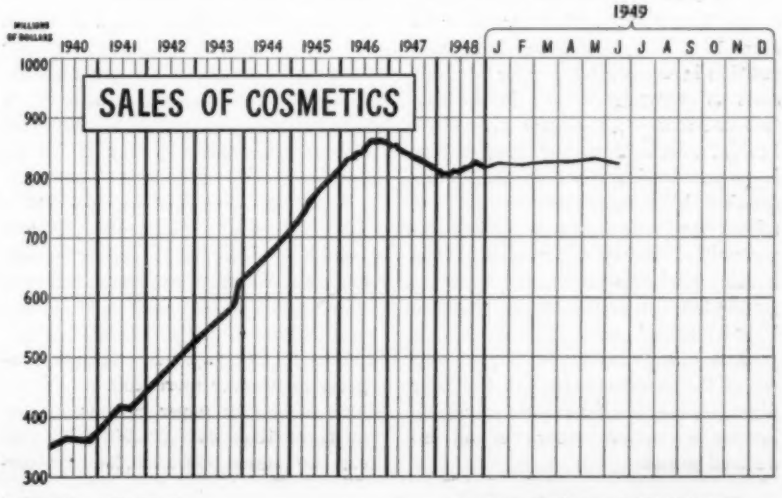
In other words, when an industry continues to open new kinds of retail outlets, do these outlets reach and pass a point of diminishing returns where they go far beyond the number of retailers necessary to give full and convenient exposure of the industries product to every city, town and hamlet trading center in the United States? Then do these stores reach and pass a point where so many retailers are competing for the amount of money consumers will spend for these products that it no longer becomes really remunerative to so many dealers to give these products ample display space in their store and specialized sales clerk selling.

If for instance, we say that the total amount of money that will be spent for perfumes, cosmetics and toilet preparations, including those basic, low priced, utility toilet articles which are non-taxable, will be not in excess of $800,000,000 for this year, then it is of interest for the industry to ask how many retailers can we divide this $800,000,000 among and still retain the high degree of retail display and selling which the industry must have.

If this is a problem of the industry, it is even more specifically a problem of the manufacturer. Obviously the manufacturer of an every day utility product, such as shaving cream or tooth paste, faces a totally different problem in distribution from the distributor of a high priced perfume, where the prestige of retail association is of vital consideration and where the preference of the shopper is to purchase a product of this sort in the primary trading center.

But even with a product such as tooth paste, there is a limit which

Retail sales of cosmetics for the twelve months ended with June 1949 amounted to $826,460,000. This compares with $831,318,000 for the twelve months ended with May 1949 and with $808,662,000 for the twelve months ended with June 1948.



can be reached which gives adequate and complete accessibility of the product to any customer who wants this product on a quick convenient purchase. Certainly a point must be reached where the total amount of business which they can anticipate for this tooth paste will determine the number of stores which can make a turn-over of this product at a rate which gives that product the minimum degree of retail interest.

There seems to be a growing feeling among retailers that national advertising serves to identify a product and facilitate sales rather than to create a demand which will automatically bring about a sale. The intense interest in the retail trade today in appraising the variable values in the use of display and the growing insistence on local advertising is, in part, a result of this growing conviction.

If this trend in thinking continues, with the growing conviction on the part of the retailer that national advertising does no good beyond identifying a product or a brand and its quality and that the real selling must be done through display and behind the counter, then both the individual manufacturer and in fact the particular industry must give continuing serious thought to the problem of retail dilution.

Druggists' Cooperative Advertising

In a new application to local cooperative advertising McKesson & Robbins and Weco Products are breaking a one thousand-line ad in newspapers on the west coast.

This advertising is promoting a combination of tooth brush and ammoniated tooth powder sales over the signature of "Your Independent Druggist." More than 1200 members of the Southern California Pharmaceutical Association, which is sponsoring this plan, have set up an Advertising and Distribution Committee and have named an advertising agency to work in cooperation with manufacturers.

While this form of advertising is not securing the local retail rate, the Association claims that this is more than offset by advantages in procuring immediate, effective distribution and by extensive, tie-in cooperation with the local stores.

The independent d r u g g i s t s have signed an agreement that on these cooperative plans, they will pledge their full cooperation and agree to stock and properly display the product of any manufacturer who has been approved by the Advertising and Distribution Committee.

Company Relations

Two excellent examples of industrial relations by companies associated with this industry have recently come to our desk.

The first of these is a book published by Johnson & Johnson which contains a series of informal talks or chats by General Robert Johnson, Chairman of the Board of Johnson & Johnson.

There was a time when Mr. Johnson knew personally all or most of the employees of this company. In an effort to maintain a "family"attitude among the plants and the personnel, these 44 short, informal talks were tape-recorded and played at intervals to groups of plant workers in the various Johnson & Johnson plants scattered throughout the country.

These talks covered a wide range of subjects including the growth of the company, the operation of various departments and a wide range of subjects having to do with the scope, the operation, the ambitions and ideals of Johnson & Johnson.

Anyone reading this book is bound to get a warm, personal feeling of intimacy which has been transferred from the president to the employees of the company.

The Robert Gair Company provides the other example. The Gair Carton Division, located at Piermont, New York, which normally employs about 1000 people, is a dominant industry in this town, and 95 per cent of its employees live within 10 miles of the plant.

The company feels that their future personnel must be drawn almost entirely from the pupils and graduates from the various schools in the community and since Piermont is located very near to New York City, there is obvious competition in the community for the best class of personnel. Gair is meeting this situation with a very interesting booklet called, "Jobs For You," which is prepared with the objective of informing high school and vocational school pupils in the area of job opportunities in the Gair plant. The booklet will be distributed in the schools by the teachers at the beginning of the 1949-50 school year. This booklet is profusely illustrated giving step by step all of the processes used at the Gair plant. This in itself makes an extremely interesting picture record of an industrial process.

These illustrations are localized by inserting the names and addresses of all of the employees whose pictures appear in the book. Gair has found very enthusiastic cooperation by principals, teachers and especially directors of vocational schools in the preparation of this booklet. Aside from the keen interest which this book must have aroused in the minds of many school children to whom the Gair plant is a very important, local personality, the book itself is an interesting and instructive presentation of the process used and the operation of a plant manufacturing paper-board and folding cartons.

These two books are certainly a contribution to the developing science of community, public and labor relations. Any business man who is interested in this subject can, undoubtedly, persuade either or both of these companies to send him the books.

More Plastic Caps

According to the Department of Commerce the output of plastic caps (excluding caps for collapsible tubes) for packages increased from 168 million units in February to 173.1 million units in March 1949.

Shipments of caps in March were increased to 170.6 million units from 161.2 million units in February.

The number of producers of plastic closures included in this data totaled 19 plants operated by 17 companies.

Paper Boxes

Custom-built paper boxes and containers are expected to reach an annual volume of more than $1,500,000,000.

The manufacturers who are expected to spend this large sum are divided as follows, in accordance with a recent survey: The confectionery industry $160,000,000 of set-up boxes of which 60 per cent will be furnished by manufacturers and about 40 per cent by retailers. The cosmetic industry is estimated to use about $500,000,000 of packages, practically all of which are furnished and used by manufacturers.

Drug and chemicals will use $400,000,000; h a r d w a r e, $250,000,000; jewelry, $175,000,000; leather goods, $600,000,000; office equipment and supplies, $100,000,000 and textile and knitted goods, nearly $1,000,000,000.

The folding paper box industry expects to produce more than 2.2 million tons of folding paper cartons, valued at more than $450,000,000. To this can be added $800,000,000 for cor-

rugated and solid-fiber cans and tubes making the total national expenditure for paper boxes and containers in 1949 at approximately $1,615,000,000.

Dilemma for Department Stores

There has been a great deal of interest recently on the relative status of the department stores as compared to the drug store in the sale of cosmetics and perfumes. Apparently, this has been aroused by various remarks going around that the department store during the last few years has been losing ground as compared to the independent drug store in the sale of these products.

Not only in perfumes and cosmetics, but in a wide range of merchandise, the department store was particularly favored during the war years. These big centralized stores were more experienced in selling the higher priced merchandise that was in demand than were the chains, independent stores and mail-order houses. In addition to their large purchasing power, which gave them a favored position with many suppliers, there was a notable trend among manufacturers to reduce their distribution and to secure a more compact, prestige pattern in their distribution, all of which favored the department store.

Preceding the war the record of the department store as compared with other large retail outlets was not a particularly happy one. For instance, in 1939 chain stores retailing general merchandise sold 24 per cent more in dollar value than they had in 1929. The combined mail-order and store sales of Sears Roebuck and Montgomery Ward had increased a full 60 per cent. Total national mail-order sales were up 4 per cent. But the sales of department stores remained at a flat 10 per cent peak below the 1929 level. It was becoming obvious at this time that the department store, as it was then organized and is still largely organized, was a high cost retail operation with many traditional imponderables that were losing favor with the public and that its importance in retailing was decreasing.

All this was changed by the war which brought an era of flush prosperity to the department store and largely cancelled certain inherent faults in this type of operation. Today the department store is faced with very high labor costs for which there appears very little opportunity for increase in productive efficiency or for cost reduction.

The majority of department stores make very poor use of space as compared, for instance, to the most modern super-market. Credit and a very high rate of returns is another burdensome cost factor. Leading department stores are just beginning to examine their archaic system of warehousing and material handling which are proving a serious financial burden.

The recent report of the Comptrollers Congress showed substantial decrease in profits, averaging the low figure of 2.3 per cent, which is very near the pre-war ruling profit figure. As compared to an average exceeding 4.5 per cent, which ruled through the war years, this is a substantial drop.

The big chains or associated groups of department stores seem to be finding economies in operation or purchasing, which puts them in a somewhat better position than the individually operated store. Also suburban branches seem to be operating more profitably than the main store, although it should be noted that all branches are such a recent development that there has been no opportunity of testing their success in a more competitive market.

Magazine surveys, and particularly the panel surveys of daily newspapers for the last two years, have shown a trend in the purchase of perfumes and toilet articles from the department store to the drug store. This switch averaged around 3 to 4 per cent, but so far as the last two years go, it is a definite trend and it seems to be national. The reason for this may be that the big department stores are becoming less and less available for convenience shopping because of their location in centers of great traffic congestion, and it may also be traced to the fact that the department store has been more ruthless and less interested in customer preference in their reduction of their inventories than has the average, independent, individually operated store.

Whatever may be the status of the department store, it is very clear that this system of operation is facing even more drastic retail competition than it encountered before the war when they were losing ground.

The spreading acceptance of the super-market type of operation, combined with a retail tendency of stores of this sort to feature a widely diversified type of merchandise and combined with a substantially lower operating cost, is one form of competition. Another form of low cost competition is the expansion of the variety store into higher priced merchandise, covering nearly the range of the department store. A third form of competition is the increasing efficiency of chain store operation, particularly in the field of warehousing and in the mechanical or engineered handling of merchandise from the supplier to the consumer.

Suppliers who depend primarily on the department store for their distribution will do well to watch the competitive position of the department store with very careful interest. It is certain that the department store cannot persuade manufacturers to increase their already very high discount, and it is probable that they will not continue to be able to persuade many manufacturers to finance many of their own sales operating expenses, a marketing evil which the department store more than any other type of retailer has fostered.

There is nothing in the situation, at the moment, to point to a fundamental change in the status of the various types of retailers. But it is a trend that has been clearly indicated, and the probability is that unless the department store can develop a far more efficient and lower cost method of operation that many of the single, independent stores will pass out of the picture during the next 10 years.

Sales by Machines

The vending machine industry is one industrial group that has plenty to keep it busy with an optimistic prospect of steadily expanding sales. Now doing around one billion dollars a year, industry leaders anticipate a growth that by 1951 may bring an annual volume of three billion dollars.

The industry does have some troubles because they are finding out a great many things that affect the sale of machine dispensed products. One instance which has already received quite a bit of publicity in the business press is the study of machine location at LaGuardia Field. In this case the machine was moved six feet and its revenue was doubled. At the present time it is said that vending machines at the airport contribute 10 per cent of non-aviation revenue.

Vending machines are beginning to appear in retail stores. R. H. Macy & Co., for instance, have 90 automatic vending machines in constant operation. Of these 77 are located in recreation rooms for the store's 10,000 employees.

SALES PLUS for Pharmaceuticals

Attractive Rexall first aid kit container molded by The Plas-Tex Corporation, 2525 Military Avenue, W. Los Angeles 25, California.

STYRON RIGID CONTAINERS

Speed sales with Styron containers! Whether the package for your product requires eye-appeal or protection, specify Styron for crystal clear or brightly colored containers that *display, protect, sell!*

Check these valuable merchandising advantages that Styron Rigid Containers give to products in the pharmaceutical, cosmetics, jewelry, dairy, and industrial fields—then add that bonus value —RE-USE! Reap the profits of smart merchandising—specify Styron rigid containers for your product.

Durable pharmaceutical vials molded of Styron by Celluplastic Corporation, 50 Avenue L, Newark 5, New Jersey.

- **DISPLAYS**—clear vision is excellent product merchandising.
- **PROTECTS**—against costly damage, deterioration, handling and breakage.
- **SELLS**—modern design with high eye-appeal that moves merchandise.
- **DESIGN FREEDOM**—package can be easily adapted to specific needs.
- **CHEMICAL RESISTANCE** — package does not react with most chemicals.
- **ECONOMY**—low unit production cost.
- **COLOR**—crystal clear or gem-like colors with printable surface.

The Dow Chemical Company, Plastics Division Dept. RC-3
Midland, Michigan
Please send me further information about Styron Rigid Containers.

Name_____

Company_____

Street_____

City_____ State_____

DOW

Plastics Division RC-1
THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada

Industry leaders believe that the vending machine now used to dispense quite a variety of hot and cold drinks, both hot and cold foods, candy and cigarettes will occupy a very important dispensing position in industrial plants. These machines require large traffic centers or areas where large numbers of people are concentrated, such as railroad stations, airports and other transportation centers, large office buildings and apartment houses. But the industrial plants employing in the larger industries many millions of people in close concentration unquestionably open the most direct line for future expansion.

Research in this industry has been extremely active, not only in making the operation fool-proof, in procuring visibility of the product on display, but in adapting the machine to a constantly increasing variety of packaged products.

If we consider the growth of the machine vending industry during the last few years as compared to its long and rather rocky history preceding that, there are reasons to assume that this system of marketing has started to come of age and will proceed at a very rapid pace.

It can be said now that so far as customer convenience goes and fool-proof operation, the industry has already won popular approval for a limited number of products.

It is possible that in the next several years, if automatic vending makes an important success in factory buildings, that this system will gain full recognition by many manufacturers as a new retail outlet and for certain people in this industry who are producing such every day utilities as aspirin, milk of magnesia tablets, lipsticks, tooth paste, shaving creams and many other products, they will have to include the vending machine with the super-market as one of their future sales problems and sales opportunities.

Survey on Cosmetics

The Research Department of the Crowell-Collier Publishing Company, New York, (Woman's Home Companion) recently compiled a survey on women's cosmetic habits among a random selection of some 4800 Companion subscribers. Of these, 3433 women, or 71 per cent, returned fully answered questionnaires. The questions were divided into the categories of make-up; care of the face, of the hands, and of the hair; and the use of fragrances, bath products and similar items. The resultant survey has been presented in a composite view, showing the varying cosmetic trends according to age groups, occupation (homemaker or out-of-home worker), and income groups.

Although occupation seemed to make little difference in the women's cosmetic habits, the individual income groups, which were divided in five parts ($7500 and over, $5000-$7499, $3000-$4999 $2000-$2999, and under $2000) displayed marked preferences. Women in the low-income groups in general shied away from products which were not absolutely essential, while those of the higher groups purchased non-essentials as well as the necessary items, though not in such large percentages.

Approximately 78 per cent of the women in each group, for example, bought hand lotion, while 19 per cent of the $7500-income group purchased "Quick Drier for Polish," and only 4 per cent of the low-income unit invested in it. This comparison may be carried to other items: cuticle cream, 23 per cent to 11 per cent; nail polish, 84 per cent to 67 per cent; and cuticle remover, 47 per cent to 29 per cent. An exception is present where the Home Wave Kit is concerned, for the higher income groups apparently attend beauty shops more frequently and therefore demand fewer wave kits.

Youth also is reflected in the home-wave preparations, for 63 per cent of the youngest group always do their own hair, as compared with 31 per cent of the oldest.

There is little differentiation among the varying age groups in the use of the conventional face creams, powders and lotions; however, the youngest group contains the most frequent users of the special make-ups like mascara (49 per cent compared with 10 per cent of oldest group), eye pencil (34 per cent against 18 per cent), and leg make-up (20 per cent against 1 per cent).

General results of the survey show that 80 per cent of all the women use face powder most of the time, 85 per cent use lipstick, and half of them use rouge and powder base. None of the specific items like mascara, eye pencil, and allied articles are used by more than 14 per cent of all the women. The common lipstick holder is favored over the pencil type, but here again the survey indicates the longer, more extreme type is most popular among the younger age group. The clear bright-red lipstick is most favored in any age group, with medium blue-red and dark red next in choice.

The report shows that about one half of the women use lotions only, in the care of the hands, a third use lotion and cream, and a smaller proportion use cream only. Among all the age brackets at least 50 per cent of those questioned manicure their nails once a week, with the youngest group reporting the most care. Of the total response, 79 per cent of the women indicated they always do their nails at home. Approximately 80 per cent of the total use nail polish and favor either the untinted or clear-red shades. At least two thirds of those women younger than 46 years of age wash their hair once a week.

Wire Recorder Ups Sales

The Tape and Wire Recorder Manufacturers have been investigating retail selling, and think they have found an answer to increased sales.

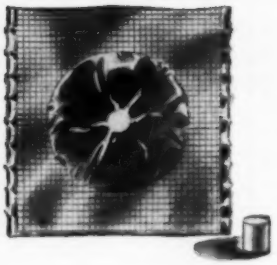
It is said that in a store in Wisconsin, sales were reported to have increased 20 per cent above the previous average normal when a simple magnetic recorder especially designed for point-of-sale advertising was installed.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of June 1949 as compared with the same period in 1948.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	–3	–2	Minneapolis	–2	–4
Baltimore	–6	–6	Milwaukee	–9	0
Birmingham	–2	–1	Newark	–10	–11
Boston	–4	+2	New York	–10	+2
Chicago	–7	+1	Philadelphia	–4	–1
Cincinnati	–9	–3	Pittsburgh	–9	–2
Cleveland	–6	–3	Providence	–3	–3
Dallas	+5	–1	St. Louis	–10	–3
Detroit	–11	–2	San Francisco	–3	–7
Los Angles	–11	–7	Seattle	–7	–2

ONE TABLET
(For instance—Penicillin Triturate)



ONE DOSE
(For instance—Vitamin plus Mineral Capsules)

ONE DAY'S REQUIREMENTS
(For instance—Tablets for relief of pain)

Let's get down to fundamentals

No prescription is ever sparked by spontaneous desire — never is it a proud and cherished possession. Rather is it the result of stern necessity or the dictate of wisdom. Thus is imposed on the pharmaceutical manufacturer a far greater responsibility for making his product as acceptable as possible — and convenience is close to the top of the list. The day's-dose packages indicated here, is a good example of the usefulness and utility which is inherent in Sanitape-Sealtite packaging. Whatever the indicated dosage, it is instantly available in a package which is easily carried in vest-pocket or hand-bag, or kept handy in desk drawer. Convenience vitally influences professional approval, public acceptance and increased use — it is a basic and fundamental factor in effective merchandising — yours when your product is packaged by Sanitape-Sealtite. We shall be glad to give you details pertinent to your situation.

IVERS-LEE COMPANY • NEWARK, N. J.

Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit-dose is sealed in its own air-tight compartment—assuring complete protection and maintained efficacy. Packages, machines and methods fully covered by U. S. and Foreign Patents and Patents Pending.

Sanitape-Sealtite
THE MARK OF PACKAGING PERFECTION

New Products and New Packages

ABBOTT LABORATORIES has developed three new products: Sub-Q-Pak, a completely disposable hypodermoclysis unit which is pack sterile and ready for immediate service; Macron, a vitamin B complex and liver concentrate tablet for secondary and nutritional anemias; and Paradione, a synthetic drug for the control of the petit mal triad.

ALTYME PRODUCTS, INC., has introduced Shampoo-Straight, a product which straightens hair, washes out kinks, and cultivates the growth of loose waves in place of tight curls. The first shampoo removes about 30 per cent of the curl, it is claimed, with subsequent treatments producing a silky smooth natural look. Each package contains ingredients for five treatments.

PARFUMS ANJOU is ready to distribute a "Double Date" set which contains twin one-ounce bottles of Apropos and Devastating Eau de Parfum. The box is covered in embossed pink and gold foil reproduction of French brocade.

THE BAYER COMPANY DIVISION, STERLING DRUG INC., is introducing the new children's size Bayer Aspirin in bottles containing 30 tablets of 2½ grains each. The tablets are flavorless and colorless so children will not mistake them for candy.

BORROUGHS WELLCOME & CO., is introducing Syncurine, a synthetic compound with a pronounced curariform action. It is free from histamine-like activity and is said to have no significant effect on the cardiovascular system. Intravenous injections of 2 to 2.5 mg. can produce sufficient muscular relaxation for major surgery, or for the control of electrically induced convulsions in psychiatric treatment.

CHILD-DENT CORP. presents an anti-decay dentifrice for children, Childdent Tooth Paste, which contains sodium fluoride. Special group tests indicate the preparation is 40 per cent effective.

HOUSE OF GUERLAIN is celebrating its 120th anniversary by introducing a new perfume, Fleur de Feu. It is packaged in a fluted crystal bottle, encased in a chest of grey suede embellished in gold.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID CO., announces the development of two new products: Vi-Alpha, an increased potency capsule which provides a massive dose of Vitamin A combined with 50 International Units of Vitamin E, and Artane, which is claimed to be 90 per cent effective in reducing the involuntary muscular spasms associated with Parkinson's disease.

MAX FACTOR HOLLYWOOD is using as a theme, "Glamour in Gold," for its new line of gift sets. They are packaged in metallic gold foil paper and offer a variety of eight attractive cosmetic gifts and assortments.

PARKE, DAVIS & COMPANY has developed two new products: Vibex, a fortified vitamin B extract of particular value to pregnant and nursing women, and Benadryl with ephedrine kapseals, an antihistaminic which gives prolonged relief from allergic conditions through the delayed solubility and absorption in the system.

PEGGY SAGE has designed a new set, named the Color Guard. for Fall selling. The set is composed of round plastic base with a grooved finger rest and holds a regular bottle of manicure polish and matching lipstick in the special introductory size.

PITMAN-MOORE COMPANY is offering an effective cough syrup, Drodeine, containing dihydrocodeinone bitartrate. It is said to be a more potent sedative than the codeine salts and is therefore prescribed in smaller dosage with minimum danger of narcotic side effects.

RICHARD HUDNUT is distributing a combination offer of its enriched creme shampoo and creme rinse in eight-ounce and two-ounce bottles, respectively.

SCHERING CORPORATION has developed two new products: Chlortrimeton maleate, an antihistaminic for use in the treatment of allergies and Tricombisul, a combination of three sulfonamides, whose greatest advantage is in providing a large margin of safety against kidney damage. With combined sulfonamide therapy there is a tendency toward more rapid and complete absorption as compared with the single compounds, according to investigation.

SCHIEFFELIN & CO. has announced desoxycorticosterone acetate, "Schieffelin," as the most recent addition to its new line of parenteral medications. The product, available as an oil solution containing 5 mg. per cc., is supplied in 1 cc. ampuls, boxes of 12, and in 10 cc. vials. Reports from various clinics indicate that administration of the product produces marked benefits in cases of Addison's Disease, shock, and myasthenia gravis.

E. R. SQUIBB & CO., is introducing a triple sulfonamide, Terfonyl, containing sulfadiazine, sulfamerazine and sulfamethazine which is available in tablets and suspension. Each sulfonamide is absorbed in the body independently. The product is said to be of greatest value in the treatment of infections of those patients who cannot tolerate sulfathiazole, either because of allergy or poor kidney function.

TUSSY COSMETIQUES is introducing a new spray liquid deodorant which is claimed to be non-irritating, harmless to delicate fabrics, and may be used after hair removal. Tussy Liquid Deodorant dries quickly and leaves no residue to be wiped or rinsed off.

VANTA LABORATORIES is manufacturing Vanta Nionic Shampoo, a mild, effective detergent for children which does not sting the eyes. The product has been hospital tested.

WINTHROP-STEARNS, INC., is introducing two new products: pHisoderm with Hexachlorophene 3 per cent, a new antiseptic type of pHisoderm, said to possess marked cleansing and disinfectant properties, and Sulfamylon, which is effective against infections caused by the gas gangrene group of anaerobic bacteria. Sulfamylon hydrochloride is used in upper respiratory infections and Sulfamylon with Streptomycin, in the treatment and prevention of wound infections.

WYETH INC. has released a new product, Solution Propion Ophthalmic for treatment of eye infections. The 5 per cent-sodium propionate solution is effective against both fungi and bacteria, according to clinical investigators.

For airtight, leakproof sealing . . .

THE ANCHOR* C. T. CAP

THE *Anchor* C. T. Cap is adaptable for all products not subject to bacterial decomposition. In application the cap thread contacts the underside of the glass thread and exerts an even downward sealing pressure on the liner, effecting a uniformly tight and dependable airtight and liquid-tight seal.

Its scientifically designed deep rolled thread improves holding qualities on min. glass; permits ample clearance over glass thread, prevents binding and gives a spin-on action which results in fast, low-cost application.

In addition, its initial low cost makes the *Anchor* C. T. Cap a most economical closure to use.

*Reg. U. S. Pat. Off.

ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio

SPEED CASE LOADING
pack in Anchorglass* Containers

WHETHER you load cartons by hand or use modern, high-speed loading equipment that simultaneously drops 12, 24 or more filled containers into shipping cartons, you'll get peak performance with *Anchorglass* Containers.

That's because *Anchorglass* Containers are uniform, tough and strong. They result from practical engineered designs—consistency in manufacture—accurate temperature controls in annealing—strict quality control—and a constant emphasis on highest manufacturing standards.

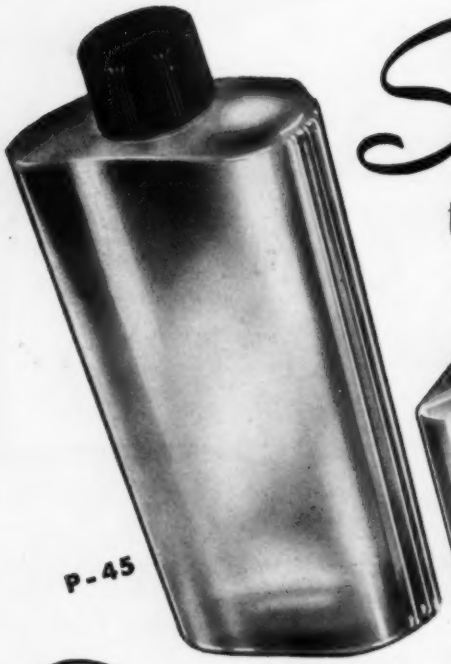
Anchorglass Containers are available in all standard styles, capacities and finishes, in crystal, amber or emerald green glass. Let us supply samples and prices.

*Reg. U. S. Pat. Off.

ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio

Stock Bottles

that give your package INDIVIDUALIZED DISTINCTION -available in all popular sizes



P-45

C-39

N-30

L-33

Add glamor and distinction to your package, without the costly investment of special design, by selecting one of the many artistic Swindell stock bottles . . . The four bottles illustrated are representative of a wide variety available for your choice . . . in sizes ranging from 1/8 ounce to 16 ounces.

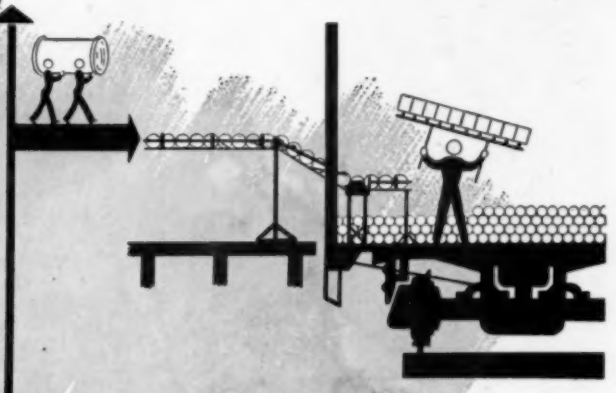
SWINDELL BROTHERS
BALTIMORE, MD.
200 Fifth Ave., New York - Roberto Ortiz, Havana, Cuba

When you think of bottles, think of

Swindell

"*there's a* **Bonus** *in doing* **Business** *with* **National Can**"

CHECK your container source for SUPPLY and SERVICE



✓ ***Ample Supply*** — always enough containers, as proved by the satisfaction of our many customers during even the lean supply years of the war.

✓ ***Prompt Delivery*** — a policy conformed to during National Can's history of nearly 50 years of container manufacture . . . a record for making deliveries when needed — where needed.

✓ ***Experienced Service*** — a choice of available services — technical, mechanical, or lithographic — for the food packer or the general container user. And at your command is our fund of production ideas, selectively gathered through the years, constantly re-examined, tested and renewed.

✓ Well-rounded service and dependable supply are only a part of the bonus values you get with National Can metal containers that are made to rigid standards of accuracy and high quality. Check these advantages and learn how they may help you by calling our nearest sales office or plant.

NATIONAL CAN CORPORATION 7415

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

Sales Offices and Plants: Baltimore, Md. • Indianapolis, Ind. • Chicago, Ill. • Maspeth, N. Y. • Hamilton, Ohio • Canonsburg, Pa. • Boston, Mass. • St. Louis, Mo.

#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

New Perfection

DROPPING PARTS

Protect YOUR PRODUCT'S REPUTATION

Your product's hard-won reputation is risked every time it is taken from the medicine chest. Any inconvenience, such as a non-functioning dropper, will be permanently associated with it. You can remove this risk by entrusting your carefully-compounded preparation to New Perfection dropping parts—painstakingly made of quality materials for the utmost in dependability and cleanliness.

* ***We can supply dropping parts to fit your bottles or furnish complete with our own bottles.***

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap; AMEKINE oil-resisting rubber bulb; blunt glass.

RUBBER BULBS

are supplied in many styles and colors. Oil-resisting. AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS

of plastic or metal, can be furnished in a complete range of sizes and colors.

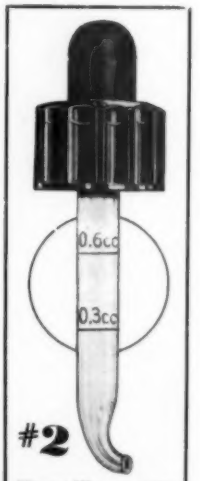
DROPPER GLASSES

are available in a wide variety of styles and sizes plain or CALIBRATED in any color to mark specific dosages.

BOTTLES

in an attractive modernistic style in Amber, Blue, Green or Clear glass, are available, complete with dropping parts, in the following sizes: 2cc, ⅛, ¼, ½, 1 and 2 oz.

Improved bottle shape. Designed to lie flat for convenient labeling. Front provides ample label space.



#2

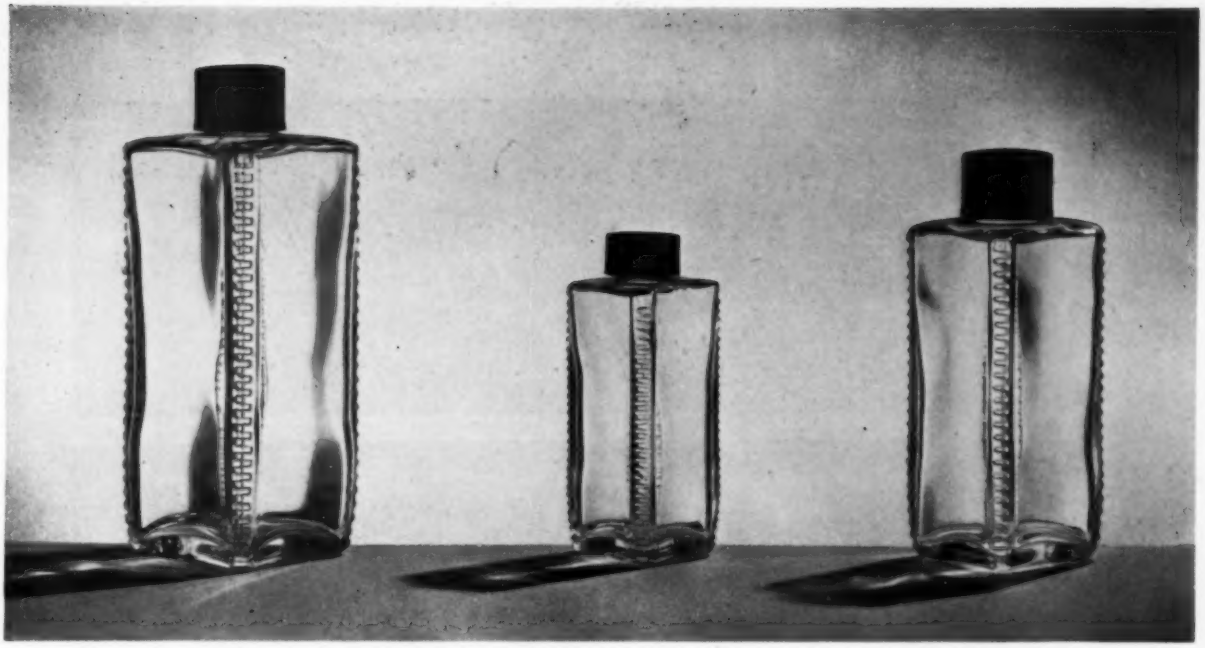
Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; CALIBRATED special bent glass.

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.



Another Popular Carr-Lowrey Model

Now Available in a Complete Range of Sizes

This square stock bottle, Style No. 424, is one of the most popular items in the extensive Carr-Lowery line because it meets the requirements of modern packaging so well. It has the beauty of line that compares favorably with containers which cost far more. It is economical to use. The light weight construction cuts shipping costs and the square shape is ideal for fast, safe packing. The unobstructed sides provide four clear panels which give exceptional flexibility in label treatment.

Now that this bottle is available in a full range of sizes from 1 dram to 16 ozs., its use is extended, not only to a wider variety of products, but also to the uniform packaging of individual products in any size required.

Your Carr-Lowery Representative will give you complete information about this bottle or it will be supplied, on request, by our office nearest you.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 40 W. FORTIETH ST. • *Chicago Office:* 1502 MERCHANDISE MART

In each of these great centers of the Soap, Perfumery and Cosmetics industries there is a Chiris company, with a complete production and distribution service. These companies pool all the experience and technical resources which nearly 200 years of outstanding leadership in the World's Essential Oil and Aromatic industries have made available to the House of CHIRIS.

ANTOINE CHIRIS Co., Inc.

119 WEST 57th STREET, NEW YORK 19, N. Y.

ESTABLISSEMENTS ANTOINE CHIRIS GRASSE-PARIS

ANTOINE CHIRIS, LTD. LONDON

NEWS...

Arthur Meier Resigns Arner Post

Arthur J. Meier, who has been with the Arner Company as vice president and general manager for the past 17 years, has resigned his position following an illness, but will remain as vice president and consultant. Mr. Meier graduated from the School of Pharmacy, University of Michigan in 1907 and worked for Digestive Ferments and Ray Chemical Company in glandular research. He joined the Arner Company in 1932.

NIELS C. KLENDSHOJ

The Company also announced appointments of Dr. Neils C. Klendshoj as executive vice president and Roy Y. Sanders, Jr. as vice president in charge of sales. Dr. Klendshoj has been associated with the company since 1927, having served in the capacity of medical and technical director.

Mr. Sanders majored in chemistry at the University of Georgia and has been associated with the Arner Company since 1943.

ROY Y. SANDERS, Jr.

Carlson Named Sales Supervisor

John G. Carlson has been appointed by Sharp & Dohme, Inc., as Sales Supervisor of the western section of the company's New York district, with headquarters in Buffalo, according to C. B. Pyle, Director of Field Operations. Mr. Carlson will succeed A. L. Barnum who has been named sales manager of the New England District.

Friedman in Lakeside Lab. Post

Dr. Harris L. Friedman, chief of the chemistry division, Lakeside Laboratories, Inc., Milwaukee, has been appointed director of laboratories. Prior to his association with Lakeside Dr. Friedman has been director of the Division of Pure Research for the Pyridium Corporation, Yonkers, New York.

Buryan in Revlon Post

Martin Revson, vice president in charge of sales of the Revlon Products Corporation, announces the appointment of Edmund F. Buryan as manager of the Revlon Export Corporation. Mr. Buryan had formerly been the manager of the international division of Bristol Laboratories.

Two New Chemicals

Two new compounds, dehydroacetic acid and its sodium salt, show considerable promise in inhibiting bacteria, fungi, and yeasts that are commonly encountered in the manufacturing and processing of cosmetics, states the Dow Chemical Company. These products have been found to be neither primary skin irritants nor skin sensitizers; they are colorless, odorless, and tasteless in all suitable concentrations.

Sartorius Elected Salesmanager

J. L. Hopkins & Co., New York, elected Robert Sartorius salesmanager at a recent meeting of its board of directors. Sartorius is the grandson of the late Jesse L. Hopkins, founder of the company.

Dillon Named Distribution Manager

James A. Dillon has been appointed Manager of Distribution of E. R. Squibb & Sons, according to J. J. Toohy, vice-president and general sales manager.

Gould Named Director

Bernard Gould has been elected a member of the board of directors of the Toni Company and appointed to the newly created position of director of sales, it was announced by R.N.W. Harris, president of Toni. Robert Harris, former western regional manager, will become sales promotion manager, while the regional managers will include Carle Randall, eastern region; Stuart K. Hensley, central region; and George Friedman, western region.

BERNARD GOULD

Czermak Assoc. Sales Manager

Appointment of Charles L. Czermak as associate sales manager of George A. Breon & Company was announced by J. Gill Jordan, president.

CHARLES L. CZERMAK

IMPORTANT MEMBER OF B COMPLEX • FOLIC ACID

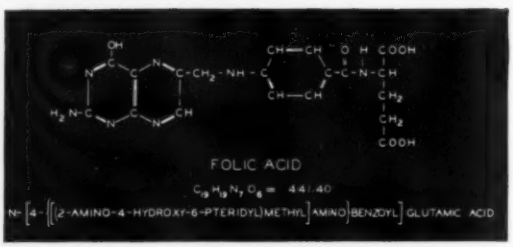
(pteroylglutamic acid)

Calco

CALCO's Bulk Pharmaceuticals*

Sulfadiazine U.S.P.
(powder and micro crystal
. . . the Sulfa drug of choice)
Sodium Sulfadiazine U.S.P.
Sulfamerazine U.S.P.
(powder and micro crystal)
Sodium Sulfamerazine U.S.P.
Sulfanilamide U.S.P.
(powder, crystal and micro crystal)
Sulfathiazole U.S.P.
(powder, crystal and micro crystal)
Sodium Sulfathiazole U.S.P.
Sulfapyridine N.F.
Sodium Sulfapyridine
Sulfabenzamide
Sodium Sulfabenzamide
Aminoacetic Acid N.F.
Calcium Pantothenate (Dextro)
Choline Chloride
Choline Dihydrogen Citrate
Cinchophen N.F.
(and Sodium Salt)
Folic Acid
Neocinchophen U.S.P.
Mandelic Acid N.F.
Calcium Mandelate U.S.P.
Menadione U.S.P.
Methylene Blue U.S.P.
(powder and crystal)
Nicotinic Acid U.S.P.
Nicotinamide U.S.P.
Nicotinamide HCl.
Para Aminosalicylic Acid
Pyridoxine HCl.
Saligenin
Propylthiouracil
Phenothiazine N.F.
(Regular and Drench grades for Veterinary use)
Certified Colors for Pharmaceutical and Cosmetic Use

*In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.



FOLIC ACID, an important member of the Vitamin B Complex, is being used increasingly in multi- and B complex vitamins. Folic Acid has wide application in anemia therapy and has been demonstrated to produce dramatic results in a number of macrocytic anemias, including sprue, gestational macrocytic anemia, macrocytic anemia of gastrointestinal origin, and the macrocytic anemias associated with pellagra and similar deficiency states. Folic Acid is effective either by oral or parenteral administration and is especially recommended for those patients exhibiting sensitivity to liver extract. Because anemias are generally considered dietary deficiencies, it is natural to combine folic acid with other members of the B complex in vitamin preparations.

Represented in Canada by Calco Chemical Division, North American Cyanamid, Ltd., P.O. Box 10, St. Lambert, Montreal 23, P. Q. Royal Bank Bldg., Toronto 1, Ontario
Pacific Coast Stock, Sales and Service Depts. maintained at Calco Chemical Division, American Cyanamid Company, 2472 E. Eighth St., Los Angeles 21, Calif.

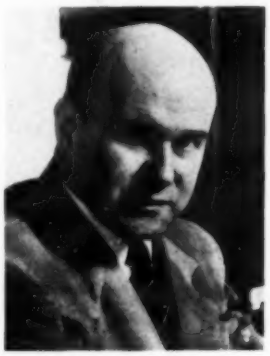
PHARMACEUTICAL DEPARTMENT • CALCO CHEMICAL DIVISION

AMERICAN Cyanamid COMPANY

BOUND BROOK, N. J.

Form DeLaire Division

Dodge & Olcott, Inc., and Fabriques DeLaire of Paris have jointly announced the formation of the DeLaire Division of the New York concern to facilitate the introduction of new perfume styles in the American toiletry goods industry. Henri Robert has been named director of the division and also of the DeLaire Research Laboratories in Paris.



HENRI ROBERT

Complete new laboratory facilities have been built by Dodge & Olcott for the new division and Mr. Robert has installed his perfume library, containing several thousand vials of perfume ingredients. Mr. Robert spent his early years in Grasse, France, working under his father, Joseph Robert, a pioneer in the natural perfume industry.

Naarden Forms Subsidiary in Oslo

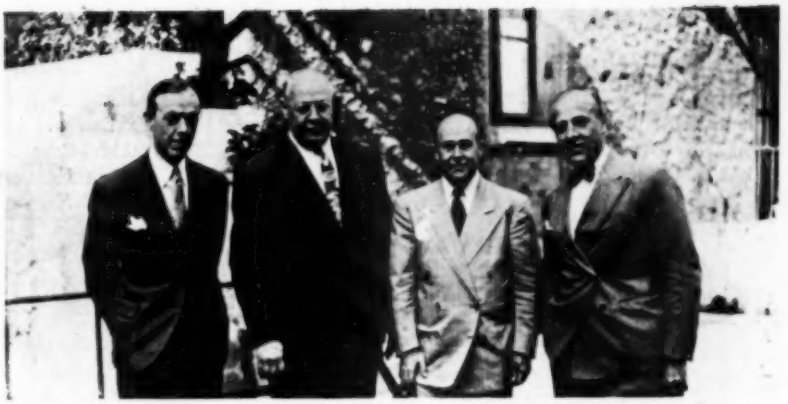
The N. V. Chemische Fabriek "Naarden" of Naarden (Holland) has established a branch in Oslo, Norway under the name of Norsk A/S Naarden. At the last meeting of shareholders, W. A. van Dorp, Jr. was appointed managing director and J. Th. Shoenmakers, assistant director of the Dutch parent company. Naarden now has six foreign subsidiary companies.

Is Named Sales Division Manager

James T. Bollettieri has been appointed manager of the Manhattan Sales Division of Winthrop-Stearns, Inc., according to Joseph G. Noh, vice-president in charge of sales. Mr. Bollettieri succeeds Thomas Bradley, who resigned from this post.

Applebaum in Cochrane Post

Cochrane Corporation, Philadelphia, has announced the appointment of Samuel B. Applebaum as manager of the cold process water treating division.



Photographed at the Fabriques DeLaire in Issy, a suburb of Paris, are (left to right) Jean DeLaire; J. F. Rudolph, president of Dodge & Olcott, Inc.; Henri Robert, director of the DeLaire division of Dodge & Olcott; and Francois DeLaire, director general of the Fabriques DeLaire. On a four-week business trip in Europe, Mr. Rudolph visited Paris for ten days to complete plans for the new DeLaire division.

George Squibb Named Secretary

George S. Squibb, great-grandson of the company's founder, has been elected secretary of E. R. Squibb & Sons, according to Carleton H. Palmer, chairman of the Board. Mr. Squibb has served in many sales and administrative capacities since joining the company in 1937. He is the first of his name to have an active job with Squibb since his grandfather, Dr. E. H. Squibb, retired in 1905 to become a member of the board of directors.

GEORGE S. SQUIBB

Aromatics Course To Be Given

A course in aromatics and perfume blending will be given during the Fall term by New York University's adult unit, the Division of General Education. Intended for perfume users, salesmen, buyers, and others in the aromatics and perfumery industries, the course will begin Monday evening, September 26 and will be taught by Samuel Klein, perfumer in charge of aromatic research for Van Dyk and Company.

R. P. Anderson Appointed

R. P. Anderson, formerly associated with King & Anderson, has been appointed representative of U. S. Bottlers' Machinery Co. for the state of Texas with the exception of El Paso. This city is covered by P. D. Bowley & Associates, west coast and southern mountain states representatives.

Perkins Becomes Assistant Secretary of State

George W. Perkins, executive vice president of Merck & Co., Inc. until June, 1948, was sworn in as Assistant Secretary of State in charge of European Affairs August 1. He leaves the post of chief of the industries division for the Economic Cooperation Administration in Paris, which he has had, during a leave of absence from Merck, since 1948. A graduate of Princeton and Columbia Universities, Mr. Perkins served as a colonel in the Army Chemical Warfare Service in the European and Pacific theatres during the war.

GEORGE W. PERKINS

Anchor Hocking Promotes Snell and Bone

William V. Fisher, president of the Anchor Hocking Glass Corporation, has announced the promotions of W. B. Snell, Jr. to General Manager in charge of Manufacturing of the corporation's

W. B. SNELL

W. R. BONE

Package and Tableware Divisions; and of W. R. Bone to General Factories Manager of the Package Division. Both men will make their headquarters at the company's main office in Lancaster, Ohio.

Mr. Snell served as General Factories Manager of the corporation's Tablewear Division for the past twelve years. Mr. Bone has been manager of the Salem, N. J. Plant since 1944.

Package Machinery Purchases Palmer Co.

Stockholders of the Package Machinery Company ratified the recent purchase of Frank D. Palmer, Inc., Chicago, and selected Charles E. Palmer, former president of the company, as director of Package Machinery. Following the stockholders meeting, the directors of Package Machinery elected Mr. Palmer vice president of the parent company.

Sales Company Organized

Warren Miller, has organized the Miller Sales Company to represent Arthur Colton Company, Detroit. Miller Sales field organization will include Charles Wall and Robert Schrotel and will cover Ohio, southern Indiana, southern Illinois, Missouri, Kansas, Kentucky, western Pennsylvania, and West Virginia. Headquarters will be at 524 Burns Ave., Cincinnati.

Becomes Coe Chemical Co.

The Cabot Chemical Company, a subsidiary of Rexall Drug Company, has changed its name to Coe Chemical Co.

Plan Production of DL-Methionine

The Dow Chemical Co. plans to start large scale production of DL-Methionine later this year in a new plant in Pittsburgh, Calif., according to Dr. Mark E. Putnam, Dow's general manager.

Is Named Representative

George L. Livingstone of 1018 Boulevard N. E., Atlanta, will represent George Lueders & Co. in the South beginning this month.

Director of Sales

P. A. Vogel has been appointed director of sales for the Plaxpak bottle, according to the Plax Corporation, division of Hartford-Empire Co., Hartford.

Carameed Purchased by Firmenich

Carameed, Ltd., Toronto, has been purchased by Firmenich & Co., according to Charles C. Bryan, resident partner of Firmenich. Mr. Bryan has been elected president of Carameed and Gavin L. Creed, vice-president. Ernest J. Arn will be in charge of sales.

Burroughs Wellcome Lists Changes

Burroughs Wellcome has announced the election of William F. Dowling, Jr., as a director of the company and the appointment of Fred A. Coe, Jr. as assistant to the president.

Public Relations Director

Paul B. Slawter, Jr., vice president of the House of J. Hayden Twiss, New York, has been appointed director of public relations for the American Section of the Society of Chemical Industry, according to Gustavus J. Esselen, president of the section.

Dodge & Olcott Appoints Arthur Dowling

Arthur L. Dowling has been appointed assistant-secretary of Dodge & Olcott, Inc., New York. Mr. Dowling joined the Company in 1946 and acted as assistant sales manager and advertising director prior to this appointment.

Johnson Appointed

Herman Johnson has been appointed general manager of House of Westmore, Inc.

Perc Westmore and new general manager, Herman Johnson (left to right) discuss House of Westmore cosmetic items. Johnson, formerly general manager of Helen Neushaefer cosmetic company, starts his new affiliation with plans which include a reorganization of the company's entire distributive system.

Sheffield Named President

William H. Sheffield, Jr., vice-president of Innis, Speiden & Co., has been elected president and general manager of the company, succeeding his father, W. H. Sheffield who died July 25. The

W. H. SHEFFIELD

board of directors simultaneously elected R. C. Palmer, secretary of the company, a member of the board and Donald S. Cushman assistant to the president. Mr. Cushman had formerly been assistant to the vice-president.

1950 Officers Elected

New officers of the American Pharmaceutical Association have been elected by a mail ballot and will be installed at the annual convention to be held in Atlantic City the week of April 30, 1950. Tabulations were completed August 27. Those men elected are Henry H. Gregg of Minneapolis as president-elect; Roy A. Bowers of Albuquerque, N. M. as first vice-president-elect; and Louis J. Fischl of Oakland, Cal. as second vice-president-elect. Members-elect of the council for a term of three years are B. V. Christensen of Columbus, Ohio; H. A. B. Dunning of Baltimore; and Ernest Little of Newark, N. J. The current officers of the association, who will remain in office until the April, 1950 convention, are Glenn L. Jenkins, Lafayette, Ind.; Harold C. Kinner, Washington, D.C.; and Leib L. Riggs, Portland, respectively.

The ballots were tabulated by George F. Archambault, Charles Bliven, and L. M. Kantner as members of the Board of Canvassers and assisted by George P. Hager, Kenneth E. Hanson, Arnold H. Dodge, and Ernest Simnacher.

Hardy Accepts Dow Post

George E. Hardy has been appointed to the pharmaceutical sales staff of The Dow Chemical Company, according to James Day, manager of pharmaceutical sales.

Chichester Retires From Dow Post

L. A. Chichester has retired from his position of assistant secretary and general credit manager of the Dow Chemical Company. Carl A. Gerstacker, Dow treasurer, announces that Robert

ROBERT B. BENNETT

B. Bennett will fill the credit manager post.

Mr. Chichester has been associated with the company for 31 years and will be retained in a consulting capacity, according to Mr. Gerstacker.

A. Gross & Co. Names Detroit Representative

A. Gross & Co., New York, has announced the appointment of a new representative in Detroit, the J. W. Stark Company, 804 New Center Building, Detroit 2, Michigan. J. W. Stark Company will offer A. Gross & Co.'s full line of Fatty Acids in the State of Michigan and in Toledo, Ohio.

Pfizer Appoints Thompson Manager

Fred J. Stock, vice president in charge of sales (Chas. Pfizer & Co., Inc.) announces the appointment of J. J. Thompson as manager of the newly formed Food, Beverage and Feed

J. J. THOMPSON

Sales Division, with headquarters in Brooklyn. Mr. Thompson has been active in the food field for 22 years, having been until recently associated with Pillsbury Mills Inc., Minneapolis.

Change of Address

L. Sonneborn Sons, Inc. announces the removal of its executive and general offices to 300 Fourth Ave., New York.

Company Changes Name

The name of the New England Alcohol Company of Everett, Mass., a partially owned subsidiary, has been changed to Nealco-Monsanto Company, according to William M. Rand, president of Monsanto Chemical Company.

Airplane view showing the operation of Sterling Drug Inc. at Rensselaer, N. Y. Laboratories of Sterling-Winthrop Research Institute, now nearing completion, are in the background, while in the foreground are the buildings of Winthrop-Stearns Inc., including the new warehouse (center) and the Ampul Building, directly in front of it.

LAUTIER FILS

GRASSE, FRANCE

Natural Flower Absolutes
Essential Oils, Concentrated Natural Fixatives
Synthetic Aromatics

MOUSSE ODORANTE

A superior quality Oak Moss intended for fine perfumery.

MOUSSE D'ARBRE

The standard LAUTIER FILS quality Oak Moss for use in popular priced perfumes and soaps.

LAUTIER FILS also offers the above qualities with most of the color removed.

MOUSSE de CHENE BLONDE
MOUSSE D'ARBRE BLONDE

The raw Oak Moss is carefully selected to conform with LAUTIER FILS specifications. It is processed at the Grasse factories by time-proven methods.

SANTAL des INDES ORIENTALES

LAUTIER FILS Sandalwood Oil East Indian is distilled at our Grasse factories from selected raw Sandalwood.

LAUTIER FILS, INC.

321 Fifth Avenue — New York 16, N. Y.

GRASSE PARIS LONDON BEYROUTH CHICAGO ST. LOUIS SANTIAGO

Cullen to Address DCAT Meeting

Dr. Frederick J. Cullen, Executive Vice President of the Proprietary Association of America, will address the Drug, Chemical and Allied Trades Section, New York Board of Trade, Inc. at Shawnee Inn, Shawnne-on-Delaware, Friday afternoon, September 23. Dr. Cullen will discuss those activities of the Federal agencies most important to the drug, chemical and related industries, according to Fred J. Stock, vice president of Chas. Pfizer & Co., and chairman of the Business Program Committee for the Shawnee Meeting.

Accepts Lever Bros. Post

Louis F. Watermulder has been appointed administrative vice-president of Lever Brothers Co., according to Charles Luckman, president. In this

LOUIS T. WATERMULDER

newly created post he will supervise and coordinate the activities of the director of personnel and public relations, the treasurer, and the secretary and general counsel.

St. Louis DCA Holds Elections

Newly elected officers of the Drug-Chemical and Allied Trades Association of St. Louis are: Robert R. Rosenthal of The Superior Folding Box Co., president; R. Sidney Herman of The Dr. J. H. McLean Medicine Co., first vice-president; Fred L. Thielemann of McKesson & Robbins, Inc., second vice-president; George W. Barth of Owens-Illinois Glass Co., secretary-treasurer. Richard T. Dunn of the Dick Dunn Drug Products Co. is chairman of the board. The Association's annual picnic was held August 6.

Change of Address

N. I. Malmstrom & Co. announces the change of address of its Chicago office from 444 West Grand Ave. to 612 N. Michigan Ave., Chicago 11, Illinois.

Bud Keeley of Beauty Fashion making presentation to Stanley Park (left) of Geo. W. Luft Co. recently at a Bon Voyage Luncheon in the Hotel Gotham, New York. Mr. Park has since departed for London where he will establish headquarters as director of Luft in all countries operating on pound-sterling. Jack Driscoll (center) was master of ceremonies, while Walter Conklin (2nd from end) made another presentation.

BIMS Hold Golf Tourney

Members and guests of the BIMS met at Winged Foot on July 26 for the second golf tournament and at the North Hempstead Country Club in Port Washington on August 25 for the third and final tournament of the season.

In the first tourney A. D. Henderson got low gross on 76. The other prize winners included: Harry G. Griffiths of Pennsylvania Drug Company; Alec J. Dedrick, van Ameringen-Haebler, Inc.; Art Greene; Al Graff; and Robert A. Kramer of Evans Chemetics, Inc.; Pel Livsey; and Harry W. Heister of George Lueders & Co.; Frank Higgins; and James McInnes, Jr. of Commercial Solvents Corp.; Joseph G. Kelnberger of Scholl Manufacturing Co., Inc.; George Welp; and Albert C. Burgund of Carr-Lowrey Glass Co.; Louis Bezard, Schiaparelli Parfums, Inc.; Walter S. Nuckols, Swindell Bros.; Walter A. Conklin, Wallace Paper Box Corp.; Paul A. Dunkel, Paul A. Dunkel & Co.; and Frederick L. Butz, White Metal Manufacturing Co.

In the second tournament Louis Bezard of Schiaparelli Parfums, Inc. got low gross and O. Dexter Neal of the Hilton-Davis Chemical Co. came through with low net. Other winners were G. W. Sands; William W. Huisking of Charles L. Huisking & Co., Inc.; W. H. Madden; Joseph Papp; and John A. Ewald, Avon-Allied Products, Inc.; Peter L. and Paul E. Forsman of C. H. Forsman Co.; Leonard H. Schultes, The Hewitt Soap Co.; Herbert B. Sliger, Commercial Solvents Corp.; Sewell H. Corkran, Ross A. White, E. N. Rowell Co.; Edward A. Bush of Bush Pan America, Inc.; Dr. E. G. McDonough, Evans Chemetics, Inc.; and Harold S. Miner, Albert J. Bradley and Ray F. Ougheltree.

Named Food Technologist

Dr. R. R. Fulton has been appointed food technologist of Magnus, Mabee & Reynard, Inc.

Schering Names Fox Ass't to President

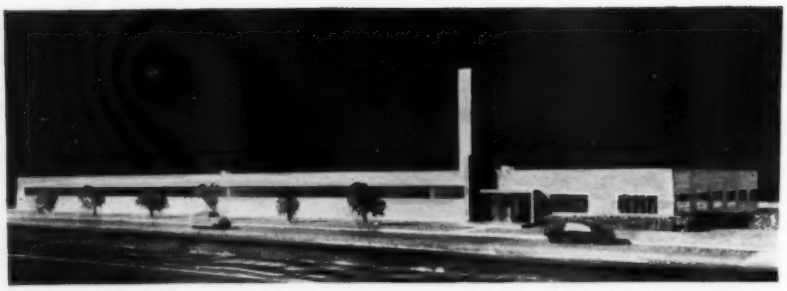
The appointment of Mortimer Fox as assistant to the president has been an-

MORTIMER FOX

nounced by Francis C. Brown, president of Schering Corporation. Prior to this appointment Mr. Fox had been Treasurer and Controller of the Indian Motorcycle Company, Springfield, Mass.

New Publication

Research Comments, a new publication of the Evans Research and Development Corporation, New York, contains in its first issue, an article on "High Polymers as Biochemical Analogs," by Murray Berdick, M.S., of the company.



Model of new laboratory and manufacturing plant of Lanteen Medical Laboratories, Inc., Evanston, Illinois, which was completed in August. The Building's one-story construction makes possible the handling of ointment, tablet, and liquid pharmaceuticals in a continuous flow operation. Approximately 60,000 square feet in area, the building will house all of Lanteen's pharmaceutical manufacturing as well as the production of those plastics used in packaging their own products.

N.W.D.A. Golf Tournaments

In conjunction with the 75th annual meeting of the National Wholesale Druggists' Association at Atlantic City, the Ladies' Golf Tournament will be held on October 10.

The Men's Golf Tournament will be held one day later, on October 11 and, the Golf Committee believes it will again be necessary to use the two courses available at Atlantic City, Seaview Country Club and Atlantic City Country Club. There will be prizes for first, second, and third, low gross, and first, second, and third, low net, in each of the flights.

Schering Corp. To Be Sold

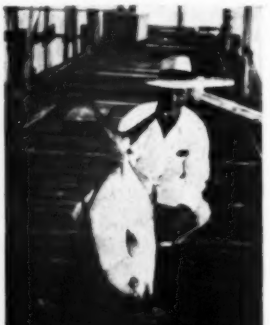
Schering Corporation will be offered for sale by the government, probably within sixty to ninety days, according to the Office of Alien Property of the Department of Justice. The government owns 100 per cent of the common stock of Schering, which is the only stock outstanding at the present time. All of the preferred stock previously outstanding, was retired June 1. Forty per cent of this preferred stock had also been owned by the government. The stocks of the corporation owned by enemies were seized during the recent war.

Government officials say that they cannot fix the exact date of the sale of the corporation until the paper work is completed. It is expected that this will take from two to three months. The sale will be made in the usual manner of sealed bids to the highest bidder. Bidders will be given thirty days to submit their offers from the date of the announcement of the sale.

Disposal of the corporation by the government was held up by two suits which have now been adjudicated. In one of these suits the Heyden Chemical Corporation claimed it had contracted to buy Schering from the Swiss Bank Corp. subsequent to Government seizure in 1942. The suit was dismissed on the motion of the Justice Department claiming that any such agreement would have to be licensed by the government, and this one was not. The other suit was filed by the Swiss Bank Corp. which claimed ownership of the stock seized by the government, while the government claimed that the Swiss Corp. was a cloak for German owners. The suit was settled out of court by the government paying a relatively small amount of money to the Swiss Corp. to drop the suit.

Robinson Ties Fishing Record

H. G. Robinson of Whittaker, Clark & Daniels caught a 39 pound 8 ounce Mexican Permit during a fishing trip



in the Florida Gulf Coast in early August and thereby tied the standing world record, according to Rube Allyn's Dictionary of Fishes. The fish measured 38 inches long from fork of tail.

Felton Expands Southern Representation

Louis Gampert, Vice President of Felton Chemical Co., Inc., has announced the appointment of James Leonard of Dallas, Texas, to represent the Company in that state and in Western Louisiana. The new Dallas address in 1207 S. Industrial St.

David Marso has been transferred from Brooklyn to Atlanta, Ga., from which central point he will cover the Felton trade in the southeastern states.

Leo C. Weinrobe, whose headquarters are in St. Louis, will continue to service Missouri, Kansas, Oklahoma, and Arkansas, and will act in a supervisory capacity for the entire southern territory.

New York Quinine Appoints Meyers

Charles R. Meyers has been appointed to the executive staff of the New York Quinine and Chemical Works, Inc.,

CHARLES R. MEYERS

in which capacity he will have direct charge of the development of N.Y.Q. prescription chemical sales to the wholesale trade.

Sells Cosmetic Division

Universal Laboratories, Inc., has announced the sale of its cosmetic division to Nestle-LeMur Co. of New York. The Nestle-LeMur Co., according to Lee Nadeau, president, is now the sole owner and distributor of V. Vivaudou's mavis talcum powder and Egyptian henna as well as Kerkoff's Djer-Kiss talcum powder, sachet, perfume and cologne.

Lucien A. Schaible Appointed

Lucien A. Schaible, chief chemist of the Oxzyn Co. for many years, has been appointed director of the new laboratory for research and product development of Charles of the Ritz, Inc., Norwalk, Conn.

Dahl Elected Director of Squibb

Carleton H. Palmer, chairman of the Board of E. R. Squibb & Sons, has announced that Roland J. Dahl has been

RONALD J. DAHL

elected a director of the Corporation. He leaves the post of vice president in charge of Research and Developmnt.

Drug & Chemical Assoc. Dinner

The Cincinnati Drug & Chemical Association held the Governor's Trophy Golf Tournament on Sept. 9 at the Kenwood Country Club in Cincinnati, with H. E. Hattersley of Solvay Sales Corp. acting as host. The next regular dinner and business meeting of the Association will take place on Sept. 30th at 6 p.m. at the Hotel Alms, Cincinnati. Justin Meyer (A. Lepper & Co.) proposed guest speaker, speak on "Peace of Mind," or the layman's idea of the art of living.

Dr. Coghill Wins Chemistry Award

Dr. Robert D. Coghill, director of research of Abbott Laboratories, and a key figure in the development of large-scale penicillin production techniques, has won the 1949 Midwest Award of the St. Louis Section of the American Chemical Society, according to Dr. Ferdinand B. Zienty of the Monsanto Chemical Company, chairman of the Section. Dr. Coghill will receive the gold medallion award at a dinner meeting of the Section on October 3.

$138,726 in Grants

Fifty-five grants totalling $138,726 in support of medical research were awarded during the first half of 1949 by Smith, Kline & French Laboratories, Philadelphia, according to W. F. Thompson, vice president in charge of the company's research. The funds were provided as scholarships and fellowships, as aids to preclinical research, and for the support of studies in various fields of clinical medicine.

Named Ass't Director

Dr. R. J. Pauly, recently named Assistant Director of Pharmaceutical Research of the Sterling-Winthrop Research Institute, has been decorated by the Lebanese government as a "Chevalier de L'Order du Cedre." Prior to joining the Institute Dr. Pauly was director of the School of Pharmacy of the American University of Beirut, Lebanon.

Plough Enlarges Plant

Plough, Inc., of Memphis has completed plans for remodeling and building an addition to an existing one-story structure recently acquired. The new plant will house all research laboratories, manufacturing lines, printing and box manufacturing equipment, warehouse, shipping and office facilities, at present scattered in eight locations throughout Memphis.

Schiaparelli Appoints Sheeran

Joseph P. Sheeran has been appointed Western representative of Parfums

JOSEPH P. SHEERAN

Schiaparelli, Inc., succeeding Arthur G. Hadley, recently named vice president and general sales manager.

Sharp & Dohme Appoints

Franklin E. Hatfield has been appointed sales supervisor of the San Francisco district of Sharp & Dohme, Inc., according to C. B. Pyle, director of field operations. Mr. Hatfield succeeds Percy L. Larsen, who has been appointed sales manager of the San Francisco Sales District.

Additional appointments include those of Dr. Martin Kuna who has been added to the staff of the antibiotic research department of Sharp & Dohme and Dr. Peter A. Tavormina who has accepted a position with the department of biochemical research, according to Dr. L. Earle Arnow, director of research.

Drug Products Co. Moves

Drug Products Company has moved to new quarters at 360 Glenwood Ave., Orange, N. J.

Salesmen's Assoc. Golf Outing

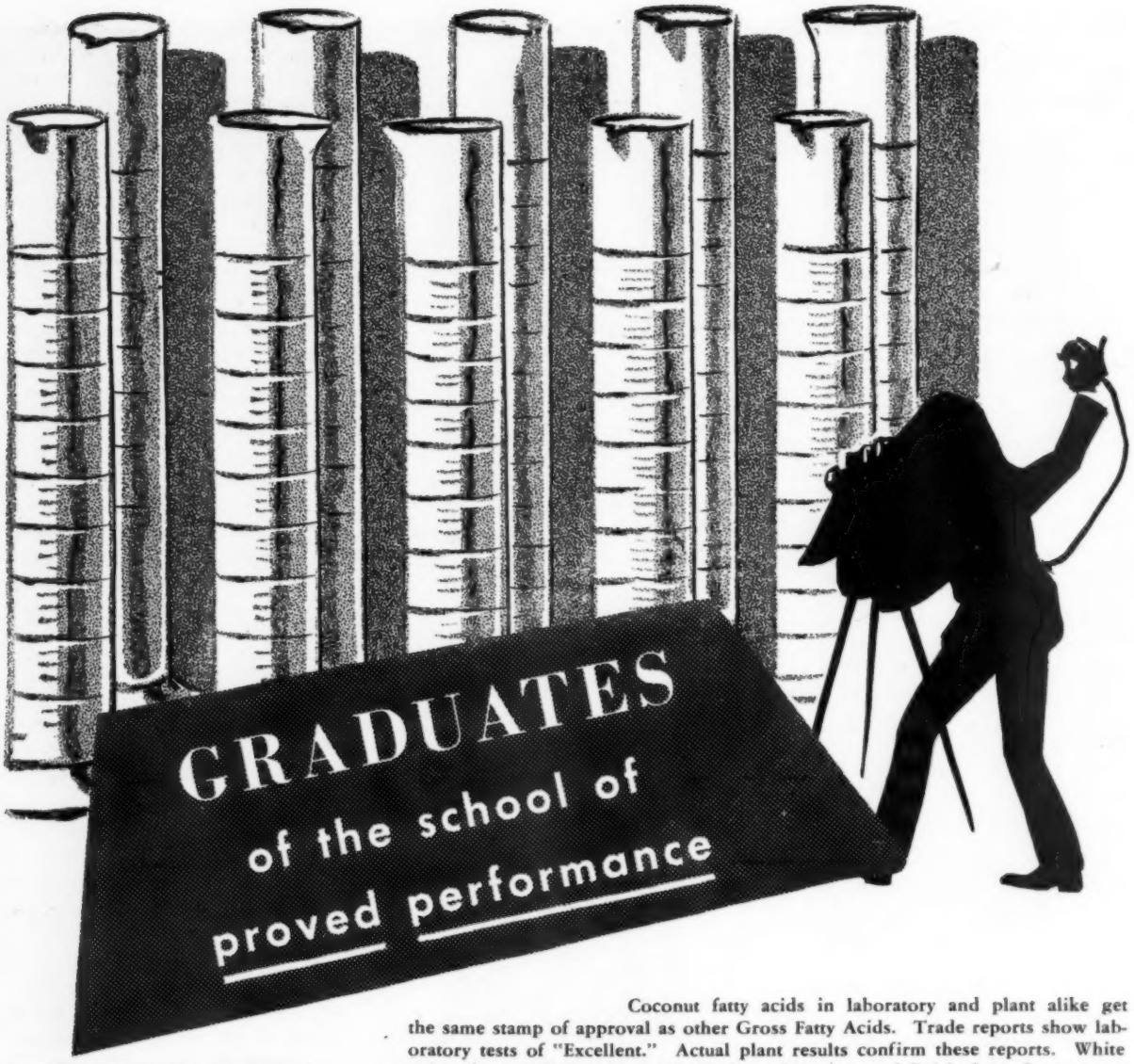
The Salesmen's Association of the American Chemical Industry, Inc. held a golf outing at Baltusrol Country Club, Springfield, N. J. on August 16. Prizes were won by the following members and guests: low gross, Flight A, Paul Dunkel of P. A Dunkel & Co. and Eugene Herman; second low gross, Arthur Mitchell; low net, Flight A, R. W. Daniels of Calco Chemical division American Cyanamid Co. and R. W. Moister; low gross, Flight B, Peter Reilly, Jr., Reilly Tar & Chemical Co.; low net, Flight B, James C. Chilcott, The Maltine Co.; and low gross and low new in Flight C, Walter H. Junker, Commercial Solvents Corp. and P. W. Hiller of Innis Speiden & Co., respectively.

The Kicker prizes were won by J. K. Duffy, Joseph Turner Co.; M. Resnick, N. Y. Laboratory Supply; Arthur F. Smith, Westvaco Chemical division Food Machinery & Chemical Corp.; H. D. Armitage, Emery Industries, Webster Rice, McKesson & Robbins, Inc., P. Bauer, Hollan Richards, and James W. Watkins. Door prizes were awarded Walter M. Burgess of McKesson & Robbins, Inc., R. H. MacEachern, Dow Chemical Co., H. A. Stauderman, and Ed C. Egan. Wallace Suffern won a prize for the longest drive and Howard Roe for "nearest to pin."

Jensen on Sales Staff

Arthur R. Jensen has been appointed to the sales staff of the Chicago office of Magnus, Mabee & Reynard, Inc. He will cover the territory of Wisconsin, Minnesota, and North and South Dakota.

ARTHUR R. JENSEN



Coconut fatty acids in laboratory and plant alike get the same stamp of approval as other Gross Fatty Acids. Trade reports show laboratory tests of "Excellent." Actual plant results confirm these reports. White color, fast wetting power and excellent detergency of finished products assure customer acceptance in the textile field.

Gross Special Coconut Fatty Acids (with most of the Caprylic and Capric Acids removed) give detergent manufacturers a more desirable product.

RED OIL—Bland odor, low titre, light color. Produced entirely from selected animal fats. Improved chemical and physical properties due to modern distillation and control.

A. GROSS PRODUCTS

Stearic Acid
Tallow Fatty Acids
Red Oil (Oleic)
White Oleine
Coconut Fatty Acids
Cottonseed Fatty Acids
Mixed Caprylic & Capric Acids
Saponification
Crude Glycerine
Stearine Pitch
Cottenseed Pitch

Manufacturers since 1837

A. GROSS & CO.
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FACTORY: NEWARK, N. J.

AGENTS:

George Mann & Co., Inc.
Providence 3, R. I.

Baker & Gaffney
Philadelphia 7, Pennsylvania

Braun-Knecht-Heimann Co.
San Francisco 19, Calif.

J. C. Ackerman
Pittsburgh, Pa.

James O. Meyers & Sons
Buffalo, New York

Braun Corp.
Los Angeles 21, Calif.

Thompson Hayward Chemical Co.
Kansas City 8, Mo. (And Branches)

Moreland Chemical Co.
Spartanburg, S. C.

Smead & Small, Inc.
Cleveland 15, O.

Charles Albert Smith, Ltd.
Toronto 3, Canada

J. W. Stark Co.
Detroit 2, Mich.

Huguenin Becomes Manager

William R. Huguenin has been appointed manager of the Stokes and Smith Company, Philadelphia, subsidiary of Food Machinery and Chemical Corp. He succeeds Gerald F. Twist, recently promoted to manager of the corporation's Peerless Pump Division at Los Angeles.

Hobson Appointed Medical Director

The appointment of Dr. Lawrence B. Hobson as associate medical director

LAWRENCE B. HOBSON

of E. R. Squibb & Sons has been announced by Dr. Geoffrey W. Rake, director of the medical division.

ADACIOM Summer Meetings

Associated Drug and Chemical Industries of Missouri, Inc. held its August summer meeting at Algonquin Country Club, Webster Groves, Missouri on August 26. Ben Donaldson of Parke, Davis & Co. turned in the low gross, while Roger Malone of Monsanto Chemical Company carded the low net in the afternoon's golfing.

ADACIOM plans two additional meetings, one at Glen Echo Country Club, Normandy, Missouri (Sept. 20) and the other at Sunset Country Club, Sappington, on Oct. 11.

Wins 1949 Schering Fellowship

Dr. D. Laurence Wilson of Kingston, Ontario, has received the award of the Schering Research Fellowship in endocrinology for 1949, according to Francis C. Brown, president of Schering Corporation.

Orchard Becomes Division Manager

Chester R. Orchard, formerly sales manager of the Cedar Rapids, division of McKesson & Robbins, Inc. has been promoted to division manager at Peoria, succeeding E. H. Abbey who has been moved up to assistant manager of the Kansas City division.

Madison Drug Names President

Emil A. Hayden has been elected president and treasurer of the Madison Drug Co., Madison, Wis. Additional elections include M. B. Findorff as vice-president and Richard E. Ela as secretary.

Weedon President of N. A. Dye Corp.

Charles J. Weedon, formerly president of J. C. Eno, Inc., Bloomfield, N. J., has been named president of North American Dye Corp., Mount Vernon, N. Y.

Regional Sales Meetings

Regional sales meetings have been scheduled by Winthrop-Stearns Inc. for the fall and winter to orient its sales staff in the company's strengthened sales program for 1949 and 1950, according to Joseph G. Noh, president in charge of sales. The conferences which began in August, will continue through November, and will take place as follows: Boston, September 26, 27, and 28 for the Boston and Hartford division; Philadelphia, October 17, 18, and 19, for the Buffalo, Baltimore and Philadelphia divisions; St. Louis, October 24, 25, and 26, for the Memphis, Cleveland and St. Louis divisions; and New Orleans, November 7, 8, and 9 for the Atlanta, Dallas, and New Orleans Divisions.

Named Research Administrator

The appointment of Robert A. Harte as Research administrator, medical re-

ROBERT A. HARTE

search division, Sharp & Dohme, Inc., Philadelphia, was announced by Dr. L. Earle Arnow, director of research.

Celebrates 40th Year

J. C. Holloran of the Strother Drug Co., Lynchburg, Va., and member of the NWDA board of control, recently celebrated his 40th year with the company.

Valentine Elected Vice-President

Kenneth F. Valentine, president of the Pitman-Moore division of Allied Laboratories, Inc., was elected vice-president of the parent organization at a recent Board-of-Directors meeting, according to Dr. E. A. Cahill, Allied Laboratories president. He will continue to serve in both capacities.

George B. First

George B. First, assistant chief engineer of Stokes and Smith Company, died suddenly on August 4, during a vacation in South Dakota. Mr. First had been with the company 34 years.

T. L. B. Lyster

T. L. B. Lyster, former chief engineer of the Hooker Electrochemical Company, Niagara Falls, died August 18 of a heart ailment following a brief illness. He was 70 years old.

James J. Morgan

James J. Morgan, former president of Hall & Ruckel, Inc. died recently at St. Jerome's Hospital in Batavia, N. Y. He was seventy-one years old.

Saunders Norvell

Saunders Norvell, former chairman of the board of McKesson & Robbins, Inc. and former Norvell Chemical Corporation head, died August 25 in Mount Vernon, N. Y. He was eighty-five years old.

A. Homer Smith

A. Homer Smith, who retired in 1935 as president of Sharp & Dohme, Inc. died on August 28 at his home in Smyrna, Del. at the age of seventy-two. Mr. Smith had been general manager of E. R. Squibb & Sons and president of the H. K. Mulford Company before becoming president of Sharp & Dohme. Mrs. Mary Evelyn Hagen Smith, his wife, survives.

Mrs. Theodore Weicker

Mrs. Florence Palmer Weicker, widow of the late Theodore Weicker, former chairman of the board of E. R. Squibb & Sons, died at her summer home in Southampton, L. I. August 21 after a brief illness. Surviving are three sons, Lowell P. Weicker, Squibb President; Theodore Weicker, Jr. and Frederick E. Weicker; a daughter, Mrs. Hobart A. H. Cook; a brother, Carleton H. Palmer, chairman of the board, E. R. Squibb; and two sisters, Mrs. Sherley W. Morgan and Mrs. F. Cliffe Johnston.

Production Forum

By FRANCIS CHILSON
Industrial Consultant

Management

As a commentary on the attack made last month on my views of management and industrial democracy, I should like to quote a letter from H. A. Sumner, President of Eaton Laboratories:

"I have been reading with considerable interest your comments in THE DRUG AND COSMETIC INDUSTRY on management. I was particularly interested in the reaction to your statements as published in the July issue. I think your correspondent failed to understand just what you meant in your previous reference to participation of employees in management.

"In a series of advertisments appearing early in 1948, Walter Gifford, president of the A. T. & T., made a statement which I think more accurately expresses the idea you had in mind when you spoke of employee participation in management. I quote from Mr. Gifford's remarks:—

'It used to be that the owners of practically every business were themselves the Managers of the business. Today, as far as large companies are concerned, a profound change has taken place. In the Bell system, for instance, *employee management*, up from the ranks, and not owner management, is responsible for running the business.

'This management has been trained for its job in the American ideal of respect for the individual and equal opportunity for each to develop his talents to the fullest. A little thought will bring out the importance and significance of these facts.

'Management is, of course, vitally interested in the success of the enterprise it manages, for if it doesn't succeed, it will lose it job . . .'

"Perhaps this brief reference to a quotation of one of the leaders of American industry will be helpful to you in your controversy."

(Thanks, Howard.) The purpose of these comments is only to stimulate thinking and discussion. Space limitations make it easy to be misunderstood because it is impossible to utilize a sufficient number of illustrations, nor to cite all the qualifications and exceptions that might be made to any proposition.

As I see it, you and I—all of us in management—have still our most important life-job to do and that is to provide the intelligent, honest, farsighted leadership without which the free enterprise system that gave us our education, our opportunities and our jobs will collapse *within this generation*.

Almost everywhere in the world our system is under attack and in our own country, it is being undermined by well-meaning but blind idealists and stupidly selfish business men. By the way you do your job; by the way you inspire respect and confidence in the people with whose direction you have been made responsible, so will you add to the strength of the free enterprise system or, failing, so will you help to destroy it. In the battle we are in we cannot hope for a Messiah to lead us all in the path we should follow; we cannot hope for inspired leaders suddenly to appear in a time of crisis, as Lincoln did, as Churchill did. We cannot leave the fight solely in the hands of our political leaders—the appalling history of the past thirty-five years should tell us that. On the contrary the fight will be won only if you and I as individuals do our part. Let us not forget that the communists have a Messiah—Stalin. Before him they had Lenin. And Marx is their god. Therein lies the source of their fanatical strength.

In my opinion it does not help our cause to insist that everything is right with Laisser Faire capitalism and the free enterprise system. Many, many things are wrong. Here are some of them:

Mere money has too much control over business. A business cannot be operated without money, of course, but money in itself is only a tool, a commodity which business men should be able to obtain in the open market just as other tools and commodities are obtained. But the provision of money carries with it the right to elect directors and through them, officers

and management. Power is a tool too. No business can be operated without it. Suppose the public utilities were unregulated by government and demanded as a condition of supplying power and similar necessary services, the right to elect our officers and directors. What a hell of an uproar there's be!

All capital is not the same. There is initial capital with which enterprises are started and there is sustaining capital with which businesses are continued. Often sustaining capital is accumulated out of profits; sometimes it is borrowed; sometimes it is acquired by floating additional stock issues. The initial capital however assumes the greatest risk and frequently is ventured by the men who actively manage the enterprise. Sustaining capital, which comes later into the enterprise and is supplied by people who contribute nothing else to the operation of the business, retains the same power dollar for dollar as initial capital. This, it seems to me, is the fundamental weakness of our system sustaining capital in my opinion should have no voting power whatever. And I say that even though I am a small stockholder in a considerable number of enterprises.

Because management is made subservient to money powers, it is compelled to do things which collectively throw the system out of gear at intervals. We are suffering a recession now and millions of people have lost their jobs—not because we can't produce the stuff the market demands, not because the market has evaporated—but simply because our pricing, and marketing mechanism has gotten out of gear. We do not reduce prices fast enough to take up the slack because we are afraid of our directors; we are afraid to show temporary losses. For a time, unsold merchandise piles up in warehouses; then we close down the shops and lay off the people who constitute the market! It doesn't make sense.

Our marketing and distribution methods are lousy. Partly this is the fault of government which will not permit a group of manufacturers to determine how big the market is for a specific product and then parcel out the business among themselves. This is called "restraint of trade." When you consider that in some industries—our own particularly—the cost of marketing a product is often several time greater than the cost of making it, it is obvious that something is wrong with marketing procedures

Business has failed to police itself and hence it has forced the government to do the policing. Business men scream to high heaven about government interference and controls and continue to do the very things that make the imposition of controls necessary for the protection of the public. The Food and Drug law is a government control forced upon business by the practices of business itself. The Federal Trade Commission is another government control forced upon business by business itself. If you think that the present generation of business men are more cooperative than the preceeding generation consider this: The president of a successful proprietary firm openly insists that the way to launch a new product is claim everything from hell to breakfast for it "because a year will elapse before the FDA or the FTC catches up with you and then another year will elapse while you are fighting the citation in the courts. In the meantime you can put your product across. After that if you lose, you can pay your fine which won't be much, and revise your tactics." If you don't think this is standard practice in some firms, I'm afraid you don't carefully read the ads for new products—not only drugs, but all kind of products. Business men, like the individual quoted, are stupidly selfish; they are responsible for increasing government control; they are contributing to eventual government ownership.

Business management is still not generally regarded as a public trust. Regardless of the money put into it; regardless of management, stockholders or labor no business can continue in being without the support of the public. Therefore the interests of the public transcends all other interests. Even though we may have started a business with our own capital; even though we may still own it in its entirety, we should not regard it as private property—a chattel to be operated as we wish. It should be regarded as a public enterprise and after it reaches a certain size the public should by law be given an opportunity to invest in it even though the public is limited to its own employees and business associates of the original entrepreneurs. While a multiplicity of small enterprises should be encouraged, rigid limits should be placed upon the size of *privately* owned enterprises. One of the faults of our system is that too few people own outright or control major interests in too many enterprises. Economic power is too dangerous an instrument to be wielded by only a few hands.

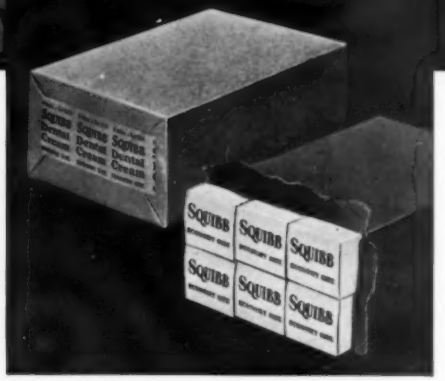
The list could be added too. But enough has been cited. We are suffering an appalling lack of business statesmanship and percipient leadership.

People need leadership. They respect and admire leaders who know their business, who know whither they are going. And this applies as well to the department foreman as it does to the President—even more so perhaps because the foreman or department head is closer to the rank and file. It's up to us all to provide such leadership within the scope of our responsibilities; thus only can we make our people immune to the evil leadership of communism.

As Bill Creasey, President of Burroughs Wellcome put it very neatly, "If communism really means sharing everything with everybody, we are the most communistic people in history, for never before has so much been shared with so many."

This is what we have to make our people realize. One of the easiest ways to make them realize it is to provide in various ways more participation in management. Under proper controls and procedures there is no reason to suppose that the permanent personnel of an organization couldn't do a better job of electing its leaders than is done by directors, who in so many cases don't know anything about the business excepting

Model F-10-J Bundling Machine in plant of E. R. Squibb & Sons



LARGE SAVINGS

being made by MACHINE BUNDLING

Our bundling machines are saving manufacturers thousands of dollars annually. And now makers of products in small-size packages can obtain a machine especially designed for their needs—our new Model F-10-J. This machine is only two-thirds the size of our widely-used Model F-10.

Using tough kraft paper, the machine makes a remarkably strong bundle, suitable for a great variety of products, including bottled goods in cartons. Packages may be stacked in a number of combinations because the machine is adjustable for bundles of different dimensions within the following range: 5" to 12" long, 3½" to 7¼" wide, 1½" to 4¼" high.

The machine may be fed by hand or from our Assembler which takes the cartons from a single line as they come from the cartoning or wrapping machines and stacks them in the desired manner. End-seals are applied automatically. Speed, 8 to 24 bundles per minute.

Write today for complete information on machine bundling

Note these Savings

- **Machine bundling replaces costly cardboard boxes, saving up to 60% on material costs.**
- **Saves labor and floor space. One operator can produce up to 24 bundles per minute.**
- **Lowers shipping costs—both to and from your plant—because wrapping material weighs far less than boxes.**
- **Saves storage space. One roll of paper replaces hundreds of boxes.**

PACKAGE MACHINERY COMPANY

SPRINGFIELD 7, MASSACHUSETTS

NEW YORK · CHICAGO · BOSTON · CLEVELAND
ATLANTA · DALLAS · DENVER · LOS ANGELES
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in a very sketchy fashion, who in many cases own little and in some cases no stock in the enterprise over which they exercise control.

I hasten to assure you I am not one of those who believes that the only way to maintain industrial harmony and, hence, to preserve our system, is continually to accede to labor's demands for additional privileges, shorter hours and more money. Money never satisfied anybody. Double labor's wages and more will be demanded. Double management's salary and more will be demanded. I have been in many organizations where wage and salary scales were actually below trade average and yet the people in these organizations were content and their morale high simply because they felt secure in their jobs and they had deep respect for their leaders. Good leadership gives everybody a feeling of security.

Good leadership can preserve the free enterprise system, which has given so much to so many, and only by good leadership will the existing faults of the system be eliminated.

The Survey

A couple of months ago I asked you to send me certain information regarding personnel classifications in your organization. Owing to an unfortunate printer's error the word 'chemical' was substituted for the word 'ethical'. Consequently the chemical firms and the proprietary companies have been furnishing data but the ethical outfits have been hanging back. So please send in your data—anonymously if you wish.

Although an insufficient number of companies have reported to make it worth while to develop a chart, I'd like to quote one proprietary company for the benefit of those who think that proprietary companies spend practically nothing on research and that research is the special province of the ethical companies. Here is a proprietary company—a large one, whose research staff is twice as large as its sales staff—twelve and one half percent of its total pesonnel are engaged in research work! Let the critics of the proprietary drug trade ponder this.

Report of Company A

		%
1—What is the total number of products you make without counting different sizes, colors or counts?	34	...
2—What is the total number of products you make counting sizes, colors, counts, etc. as separate items.	57	...
3—Is your business drug, cosmetic or chemical? If drug is it ethical or proprietary?	Proprietary	
4—What is your total personnel including the president?	813	100
5—How many are engaged in sales work including detail men and sales officials but not sales office clerks? (Include branch office personnel.)	51	6
6—How many are engaged in office work including officers and officials—but not sales or production officials?	287	35
7—How many are engaged in production, warehousing and shipping—including the plant manager?	315	39
8—How many are engaged in control work?	18	2
9—How many are engaged in research work?	102	12
10—How many people are engaged in marker research sales promotion and advertising?	18	2

This report is interesting not only from a research standpoint but also for the light it throws on the "overhead" department—the offices. For every person actively engaged in sales work there are almost six office workers. The ratio between office workers and productive workers *i.e.*, factory workers is almost one to one.

(Note to the person who cooperated by sending in this data. Your analysis adds up only to 791 people. What category do the others belong in?)

If enough of you will cooperate this survey will be very interesting and useful. So please cooperate. In October the final results will be tabulated.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Corrosion-Proof Pump

A non-corrosive "flex-i-liner" pump in which the transferred liquid or gas never touches any of the metal parts has been developed by the Vanton Pump Corporation, Empire State Building, New York City. The unique design of the pump makes it particularly suitable for handling corrosive liquids such as acids, alkalis, as well as many corrosive gases.

The construction of the pump is such that the fluid flows on the outside of the "flex-i-liner" and on the inside of the body block. The "flex-i-liner" material can be specified in either a pure gum rubber or a synthetic depending on the particular application, while the body block can be obtained in plastic or a hard rubber. An eccentric rotor mounted on a ball bearing rides inside and activates the "flex-i-liner." The "squeegee" action thus created is the basis of the pump operation.

In addition to its non-corrosive feature, the Vanton Pump offers a number of other desirable characteristics. The unit is of the positive displacement type and self-priming, doing away with the usual bothersome priming devices. The possibility of external leakage and contamination by oil or grease is avoided by eliminating glands or stuffing boxes, from the design of the unit. The absence of check valves of any sort adds to the pump's simplicity. Maintenance is a negligible factor.

Infrequent replacement of the "flex-i-liner" is the only pump service necessary. This can be done without having to remove any pipe lines or attached equipment. The unit is small and compact as demonstrated by its dimensions 3¾" x 4"½ x 2½".

Four models are available at the present time, Model A 18 (180 GPH), Model A 12 (120 GPH), Model A 6 (60 GPH), and Model A 2 (20 GPH). The units may be obtained mounted and direct-connected to a ¼ HP AC motor operating at 1750 RPM. Special requirements such as variable speed, explosion proof or completely enclosed motors can be supplied.

The Model A 18 Vanton Pump is priced at $90. All other Models are $80. The Model A 18 unit, direct-connected to a standard type motor is priced at $135, while the other models similarly furnished are $125.

Air Cleaning Machines

Perl-Oussani Machine Manufacturing Co. announces the introduction of a high speed Twin-Air Cleaning Machine which automatically cleans two bottles simultaneously and requires but one operator to depress and remove them. A continuous reservoir of regulated filtered compressed air is always available and insures a uniform high-pressure blast of air which removes all foreign particles instantly. The entire unit is enclosed in a sturdy cabinet and can be moved to any desired location.

Dehumidifier

"KEMP DRYERS for Air, Gases and Liquids," a completely new, 32-page catalog featuring a comprehensive discussion of desiccant-bed drying of air, gases and liquids, is now available from C.M. Kemp Manufacturing Company, Baltimore, Maryland.

The catalog discusses the basic principles and specific factors affecting the dynamic drying of air, compressed air, gaseous ammonia, nitrogen, hydrogen, inert gases, natural gas, oxygen and various liquids including animal oils, butane, distillate fuel oil, freon, gasoline, vegetable oils and many others.

General operation of a dryer is completely covered in a section which illustrates, by means of cut-away drawings, the drying cycle—in which the gas is dried by passing it through the desiccant bed—and re-activation—in which the adsorbed moisture is removed from the desiccant so that it is ready for a new drying cycle.

Two pages of schematic diagrams in color show how both temperature and pressures of gases entering the dryer affect the size of the equipment required for a specific process.

Clear, simple "selection charts" enable quick determination of the dryer size required for a given job.

Also listed are 26 variable factors, each affecting all the others, which must be considered to insure a dryer properly designed for the task it must accomplish.

Illustrated, and described with complete specifications, are the standard Kemp Dryer as well as special models such as the Bottled Gas Dryer, Dri-Breather, Lab Master Dryer and Portable Dehumidifier.

Of special interest in the ORIAD dryer, which provides a source of dried air in moderate amounts for actuating tools, valves, instruments and many gases.

Write, on firm letterhead, for catalog D-27 to Kemp, 405 East Oliver Street, Baltimore (2) Maryland.

"Tite-Cap"

To simplify mounting of parts, reduce weight and to eliminate vibration the body and base of the New "TITE-CAP" are now fabricated from sheet metal and welded together in one complete light weight assembly. Doors at front and rear provide easy access to the motor and drive unit as well as to the other operating parts now shielded from dust and dirt.

Owing to the greater strength of the welded design it has been possible to reduce the number of cast parts formerly required as supporting members for the body structure.

The new design makes it easy for users to install rotating transfer disks at either intake or discharge end for handling of odd shaped containers or for operating the capper at right angles to other bottling equipment to save space.

The automatic cap, feed hopper is now equipped with individual motor drive and larger cap pick-up dial for easy and quick feeding of caps at a constant rate.

Change-over parts have been re-designed and simplified so that changes from one container to another can be made in abut ten minutes even when performed by inexperienced attendants. In fact, the entire machine has been designed with a view to making it easily serviced in the field by the average bottling room handy man.

This single head fully automatic Screw Capper is manufactured by the TITE-CAP MACHINE CO., INC., Franklin Square, N. Y. C. 7.

Alsop Tanks

The Alsop Engineering Corporation announces the addition of a complete new line of Air-tight Storage and Settling Tanks (non-pressure) to supplement its line of Stainless Steel Mixing Tanks.

These modern, all welded Tanks are sturdily constructed of 16 gauge stainless steel. The all rounded corners, highly polished, crevice-free surfaces and fast, self-draining bottoms make them simple to clean and keep sanitary.

The Stainless Steel Cover with heavy rubber gasket for positive, air-tight protection features a 2" center opening with rubber cork for easy filling or may be had with standard I.P.S. or Sanitary Fittings. One or more faucets can be supplied when desired, positioned to the customers' requirements, for settling tank usage so that clear liquid can be drawn off from the upper faucet for final filtration, filling bottles or further

processing. The lower faucet is then used to drain off any remaining sediment.

Alsop "Hy-Speed" Mixing Units, available in a wide range of horsepowers, propeller combinations and speeds, can be placed through stuffing boxes on either top or side of these Closed Tanks if desired.

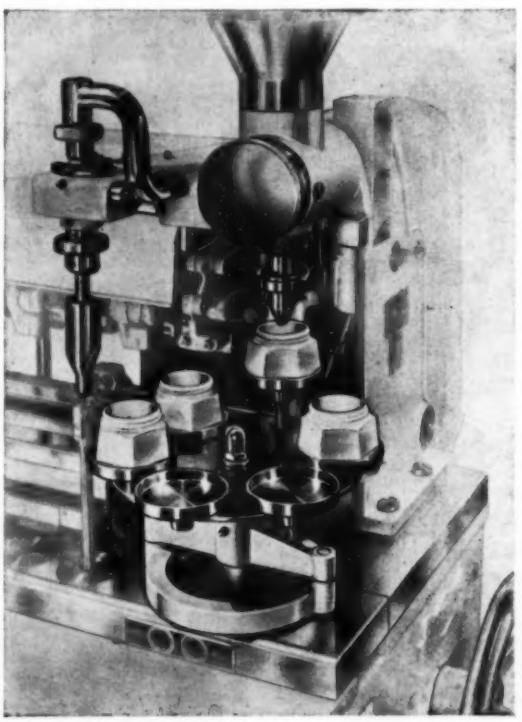
Tanks are available with sloping bottom for complete, fast draining or with flat bottom for mounting on racks or tables. All Tanks can be supplied with stationary or portable stands.

A complete range of sizes from five to two hundred and fifty gallons capacity are carried in stock. Valves, Faucets and Liquid Level Gauge Glass Assemblies are available with these Closed Tanks.

Jar Filling Attachments

Larger jars (within the capacity of the particular pump size) can now be filled with the Tube Filling GAB Machine by using the recently developed platform turret, according to Arenco Aktiebolag, Stockholm. Smaller jars, of course, can be placed in the tube holders themselves which are provided with special platforms.

The new platform turret, as shown in the figure, is fitted under the filling nozzle and connected to the tube lifter. The empty jars are placed by hand on the turret platforms, which, when arriving under the

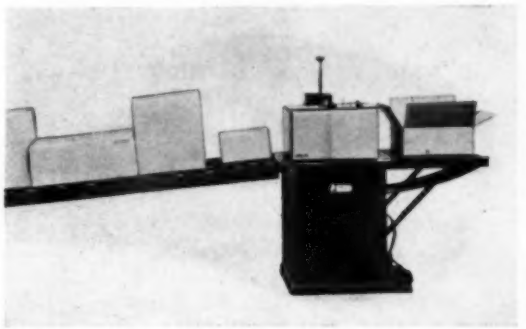


filling nozzle, move up with the jars to receive the filling quantity, and down again with the filled jars.

The figure also shows the new arrangement of the cap tightening station combined with the tube cleaning station into one. This is a definite advantage in that the tube only has to be lifted once instead of twice according to the old system with separate stations for cap tightening and tube cleaning respectively. The machine, if desired, can be delivered with cap tightening only, when tube cleaning is not required.

Case Sealer

No adjustment is necessary with the new semi-automatic Case Sealer just released by the A-B-C Packaging Machine Corp. This A-B-C Sealall will handle cases of different widths, heights and lengths



in rapid succession, accommodating from one to five cases each minute.

This Case Sealer eliminates the necessity of storage conveyors and the down time required to change from one size case to another. Further information may be obtained from the manufacturer at 220 Hampshire Street, Quincy, Illinois.

Insulated Autoclave

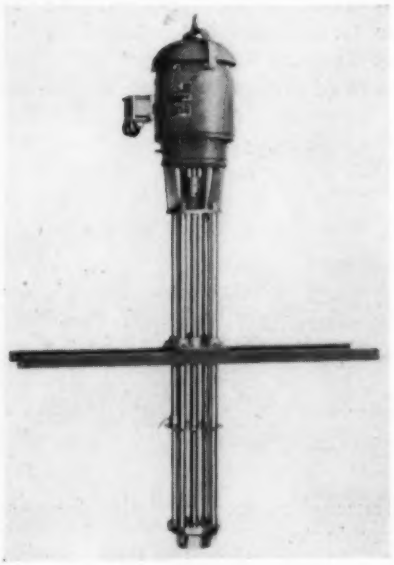
Barnstead Still & Sterlilizer Co., Inc., of Boston, Mass. announces its new rolling-door type autoclave for laboratories. Built into this sterilizer are many new and exclusive features. Its "triple-wall" construction stops heat loss, heats up faster, and keeps the laboratory cool. Of gleaming stainless steel, with a lifetime brushed finish, it stays bright for the life of the autoclave.

With two removable Monel shelves it provides 31 per cent more shelf space or 117 per cent increase over the single shelf type. New extra strong horizontal type steam generator is rigidly mounted by double suspension, with dual vapor outlets for fast heating. Generator head is easy removable for cleaning purposes.

The heavy cast door rolls easily into place and is self-aligning. The door is self-locking and cannot be opened until the pressure is relieved. The evacuation jet automatically expels air until the entire sterilizer is fully charged with steam. These autoclaves are constructed to conform with the A.S.M.E. code.

Barnstead autoclaves are made in three sizes with choice of gas, electric or steam-heated models. For further information write to Barnstead Still & Sterilizer Co., Inc., Lanesville Terrace, Forest Hills, Boston 31, Mass. 140.

EPPENBACH
HOMO-MIXER



A MIXER FOR SOLVING YOUR PROCESSING PROBLEMS

The Homo-Mixer reduces particle size—increases total surface area—shortens batch cycles.

An efficient emulsifier and disperser—easily sterilized and cleansed.

Mixes in vertical planes—prevents stratification and dead spots—minimizes surface boil.

Available in laboratory, pilot plant and production sizes. Designed to fit your tank or kettle—or furnished with single shell, steam jacketed, electrically heated, oil bath or tilting type kettles.

Vacuum and air tight installations quoted upon request.

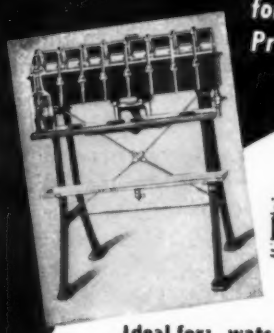
Write for a copy of Catalog No. 402.

EPPENBACH INC.

45-10 Vernon Blvd. Long Island City, N. Y.

Filpaco SIPHON FILLER

for Medium and Small Production-Filling



Ideal for: water, acids, alcohols, light oils, chemicals, medicinals, liquid soap.

- **Fills all styles and sizes of containers ranging in size from 2 oz. to one gallon.**
- **Uniform filling of every container.**
- **No pumps required.**
- **Economical—Efficient—Durable.**

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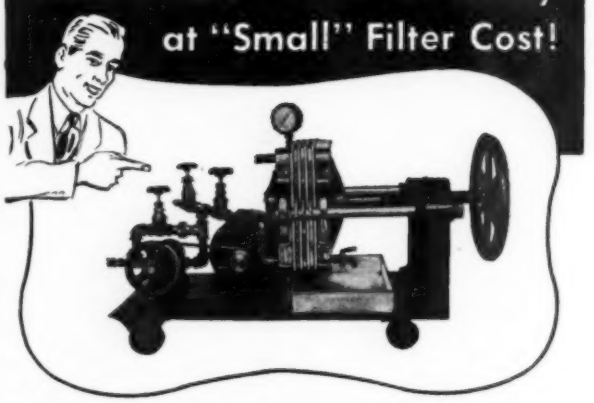

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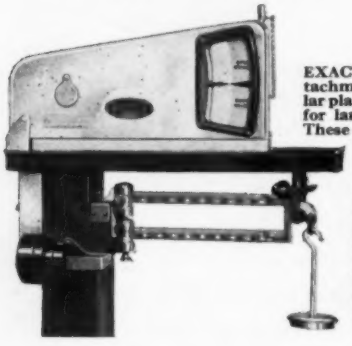

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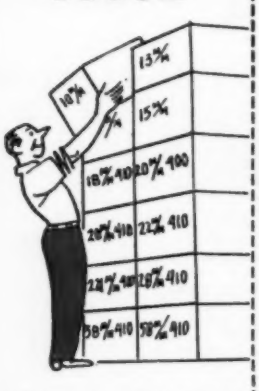

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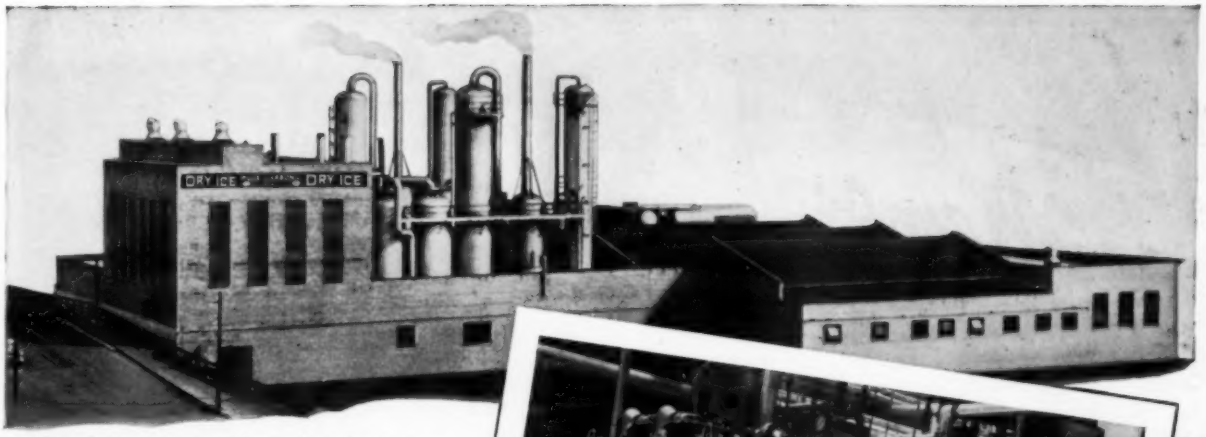

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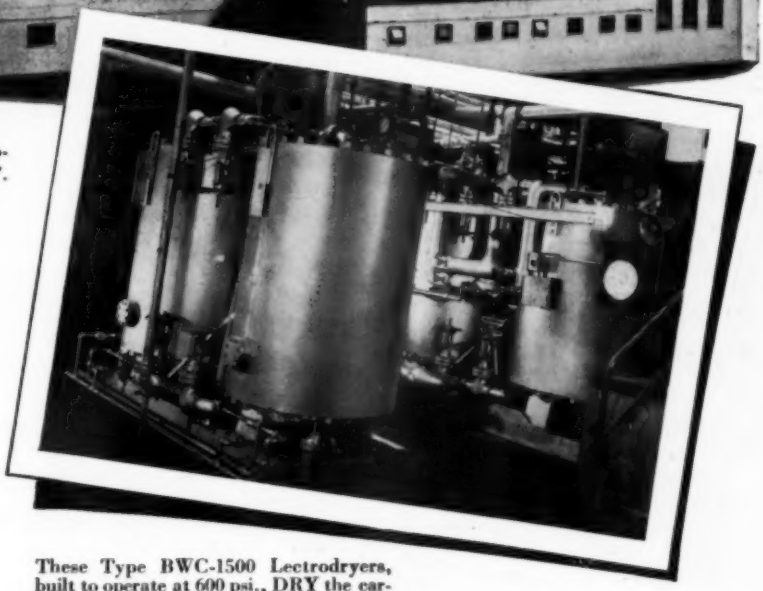

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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

More on Supreme Court's Patent Attitude

Readers of this department have been reminded as recently as this past July that even the patent lawyers cannot agree as to whether the U. S. Supreme Court's attitude on patents is favorable or unfavorable. A survey which was recently made public appears to show that the Supreme Court is not anti-patent but that if such a charge can be made it should be directed to the lower Federal courts.

According to the survey, 432 writs of Certiorari pertaining to patent suits were applied for and the Supreme Court undertook to review only 39 of these cases, thereby leaving the findings of the Federal Circuits of Appeal final in 393 cases. Of the latter, 144 were cases where the Circuit Courts of Appeal had sustained the patents. Moreover, among the 39 cases reviewed by the Supreme Court most were borderline cases; yet the Supreme Court did sustain 7 of these patents.

From the survey it was concluded that if the Supreme Court were maliciously or ideologically inclined to upset the patent system it would have granted Certiorari in the 144 cases where the lower courts had sustained and then could have declared the patents invalid. Further, the Supreme Court could have invalidated all of the patents involved in the 39 cases it actually decided.

T. Irving Potter, who made the survey, concluded that the reputation given the U. S. Supreme Court "for being blindly adverse to patents has been *created by the lower courts* through their only-too-often unfortunate interpretations of Supreme Court decisions." Potter feels that the real fault lies in the hands of the lower courts who through lack of experience in patent matters, or through basic misunderstandings in relation to patents come to false conclusions in many cases, and then attempt to support their conclusions by "interpreting" the Supreme Court's decisions.

Incidentally, Mr. Potter's solution to the problem may be of some interest. It involves what might be called a single Court of Patent Appeals, a proposal which has often been made. Mr. Potter's idea in broad outline is to have a Federal Appeals court consisting of judges learned in patent law as well as technical experts. This court would handle about 90 per cent of all patent litigation. Mr. Potter feels such a court when called upon to interpret the decisions of the Supreme Court would have the advantage of understanding the fundamentals of our patent system.

To inject a brief personal note, it is the feeling of the present writer that if a patent is based on a real meritorious invention the courts will usually if not always sustain it.

Injectable Penicillin

Although hardly any of us like the idea of taking medicine in any form I think it is safe to say that if we have to take medicine we would prefer to take it via the mouth rather than by injection. Oral administration also is preferred by physicians since it reduces the need for repeat calls. Nevertheless, the present state of penicillin development is such that both the oral and intramuscular routes are used, as the latter appears to be the one which enables the penicillin to do its work more effectively. For this reason, a recent patent (U. S. 2,476,351) issued to Stephen B. Binkley and assigned to Parke, Davis & Company, dealing with improved injectable penicillin compositions is believed to be of general interest.

Binkley points out that at the time he made his invention it was the practice to administer salts of penicillin by intramuscular injection using saline solution as a vehicle. When penicillin is administered in this manner it is quickly absorbed and large quantities appear in the blood stream soon after injection. These high blood levels of penicillin rapidly disappear due to the rapid excretion and destruction of the antibiotic. It was therefore necessary to reinject penicillin at two- or three-hour intervals if detectable amounts were to be maintained in the blood stream. In an effort to overcome this rapid elimination of penicillin, diodrast (the chemical combination of 3, 5-diiodo-4-pyridone-N-acetic acid and diethanolamine which contains about 50 per cent iodine) or p-aminohippuric acid have been administered with penicillin to interfere with renal function and thus depress the excretion of penicillin (Proc. Soc. Exp. Biol. and Med., 53, 30 (1943) and Science, 100, 107 (1944).) This unnatural physiological method has many obvious disadvantages in addition to the fact that it is not particularly effective in accomplishing its purpose of maintaining high blood levels of penicillin over long periods of time.

Another method of maintaining blood levels of penicillin after intramuscular injection, which had been proposed, was the retarding of the absorption of penicillin by placing an ice pack over the area of injection to limit the local circulation (Science, 100,432 (1944)). This method did not appreciably delay the absorption of pencillin and is very cumbersome and extremely uncomfortable.

The use of vegetable oils and beeswax-peanut oil mixtures had also been suggested as vehicles for pencillin because of their slow rate of absorption (Science, 100,412 (1944) and Science, 100,196 (1944)). Even when using these slowly absorbed vehicles for penicillin it was necessary to reinject penicillin every three or four hours to maintain adequate therapeutic blood levels of the antibiotic.

Binkley found that by intramuscular injection of a suspension of a penicillin salt in a vehicle comprising a natural oil containing a small amount of an organic compound possessing vasoconstrictor properties that it is possible to continuously maintain therapeutic blood levels of penicillin over a long period of time. He found that this period of time when using his new preparations

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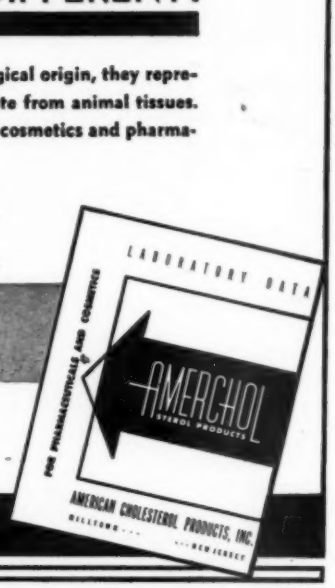

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is several times greater than obtained when one injects a saline solution of a vasoconstrictor and a penicillin salt or an oil or oil-wax suspension of a penicillin salt not containing any vasoconstrictor. He claimed that more constant blood levels of penicillin are obtainable with his compositions. This insures the presence of adequate amounts of penicillin for the exercise of a continuous therapeutic effect between injections. His penicillin compositions are said to be stable and do not cause undesirable physiological reactions on administration to humans or animals. These products do not cause pain in the region of injection and are easily injected in the conventional manner.

Examples of the vasoconstrictors which Binkley uses in the preparation of his penicillin compositions are epinephrine, 1-a-hydroxy-b-methylamino-3-hydroxyethylbenzene, 2-naphthylmethylimidazoline, ephedrine, propadrine, 1-a-hydroxy-b-methylamino-4-hydroxyethylbenzene and the like.

With regard to the natural oils employed by Binkley he states that he may use any bland, non-irritating natural oil such as peanut oil, sesame oil, cottonseed oil, castor oil, corn oil, olive oil, rape seed oil, coconut oil and the like. Binkley states that particularly valuable products are obtained when such natural oils also contain a small amount of dissolved wax such as beeswax, spermaceti and similar waxes.

Example 1 is reproduced from the patent:

3 ml. of refined peanut oil and 2.5 mg. of epinephrine are added to 500,000 Oxford units of calcium penicillin contained in a small glass bottle. Two or three sterile glass beads are added, the mixture warmed to about 40° C., the bottle stoppered and shaken for ten minutes to insure dispersion of the particles of penicillin. The mixture is then diluted to 5 ml. with refined peanut oil and shaken to insure homogeneity.

This therapeutic preparation is a uniform suspension of calcium penicillin which is stable and suitable for intramuscular injection into humans or animals. Injection of 1 ml. of this product furnishes 100,000 Oxford units of calcium penicillin the action of which is continuously maintained above the therapeutic level for about 12 hours.

According to Binkley, a great superiority of his preparations over the known ones can be seen from the following table which shows the rapid urinary excretion of penicillin in human patients following intramuscular injections of 1 ml. of various control preparations as compared to the more prolonged urinary excretion of Binkley's preparation.

	Patient No.	Formula per ml.	Oxford Units of Penicillin Excreted at the end of—hours and—hours[1]					Total per cent Penicillin Excreted
			3 hours	5 hours	7 hours	9 hours	24 hours	
Control Prepn. No. 1	4	50,000 Units of sodium penicillin in water[2]	57,000	5,000	0	0	0	62
Control Prepn. No. 2	2	50,000Units of sodium penicillin+0.5 mg. epinephrine in water[2]	36,400	5,000	700	0	0	42
Control Prepn. No. 3	18	100,000 Units of calcium penicillin in peanut oil	32,500	1,150	0	0	0	33.7
	19		45,600	3,000	200	0	0	48.8
Prepn. described in Example 1.	6	100,000 Units of calcium penicillin+0.5 mg. epinephrine in peanut oil.	24,100	14,800	12,600	5,400	5,000	62
	7		28,500	18,000	13,000	5,300	2,600	67
	12		37,240	24,000	6,300	7,600	1,700	77
	13		22,750	29,300	[3]	6,000	315	58
Prepn. described in Example 3.	30	100,000 Units of calcium penicillin+0.1 mg. epinephrine in peanut oil.	21,000	5,550	1,000	500	0	27.5
	31		4,300	5,300	12,000	2,000	1,200	14
Control Prepn. No. 4	14	100,000 Units of calcium penicillin+3% beeswax in peanut oil.	3,500	5,200	1,250	250	250	10
	15		14,350	5,280	3,300	1,560	1,000	24.5
Prepn. described in Example 9.	1	100,000 Units of calcium penicillin+0.5 mg. epinephrine+3% beeswax in peanut oil.	1,800	9,500	6,400	[3]	18,400	36
	16		11,730	12,570	10,395	4,836	2,680	42
	17		1,500	3,200	8,540	11,500	6,500	31

[1] Oxford Units of penicillin determined by the Oxford Plate Test as described by Fleming.
[2] 2 cc. of this preparation administered, a total of 100,000 Oxford Units.
[3] Samples not collected.

Binkley obtained rather broad protection on his improved compositions.

Recent U.S. Patents

2,473,042 — **Monsanto — 3, 5-Dihydroxy-4-Dihydro-Thiadiazine-1-Dioxide.**

2,473,115—**A. E. Vaughn—Hair Curler.**

2,473,121 — **Upjohn — 3-Alkylsulfonamido-Pyridinium Salts.**

2,473,198—**L. I. Fink—Hair Waver.**

2,473,339—**Abbott Labs.—Stable, Sterile Aqueous Solutions of Streptomycin.**

2,473,811—**American Cyanamid Co.—Desoxy Iso-Xanthopterins.**

2,473,817 and 2,473,818—**American Cyanamid Co.—Riboflavin Process.**

2,473,931—**Merck & Co.—2-and 4-Sulfanilamido Quinazoline.**

2,474,412—**F. C. Bersworthy—Soapless-Germicidally Active Detergents.**

2,474,651—**University of Michigan—Basic-Alkyl Esters, e.g., beta-piperidino-ethyl alpha-(para-xenyl)-propionate hydrochloride. Antispasmodics.**

2,474,719—**Merck & Co.—Method for Separating the Stereoisomers of Alpha-Hydroxy-Beta, Beta-Dimethyl-Gamma-Butyrolactone.**

2,474,729—**Societe des Usines Chimiques Rhone—Poulenc—Insulin Preparation. Contains polyvinylpyrrolidone.**

2,474,758—**Merck & Co.—Complex Salts of Streptothricin.**

2,474,796—**Wm. S. Merrell Co.—Alkylaminoalkyl Esters of Alicyclyl-Alicyclic Carboxylic Acids.**

2,474,818 to 2,474,824 and 2,474,931—**Parke, Davis—Quinoline and Acridine Compounds.**

2,474,873—**Kurlash Co.—Eyelash Curler.**

2,474,893—**Pyridium Corp. Phthalamidic Acid Compounds of Pyridine.**

2,474,989—**Hoffmann-La Roche—Injectable Iron Preparation.**

2,475,139—**Hoffmann-La Roche—Pentaenes Process.**

2,475,689—**Hoffmann-LaRoche—Quaternizing Pyridine Compounds.**

2,475,793—**Sterling Drug—Preparation of Cholinesterase.**

2,475,917—**Du Pont—Mussel Provitamin D.**

2,475,920—**Therapeutic Research Corp.—Penicillin Process involves use of small amounts of materials including beta - phenylethylamine and phenyl acetamide.**

2,475,929—**Maltbie Chemical Co.—N-Allyl-2-Pyridone-5-Carboxylic Acid.**

2,476,082—**E. R. Squibb—Prolonged-Action Preparations of D-Tubocurarine Salts.**

2,476,107—**U. S. A.—Penicillin Process.**

2,476,360—**Parke, Davis—Preparation of Pterin Compounds.**

2,476,443—**Merck—Lower Alkyl Esters of Alpha - Phenylacetamido-Beta-Acyloxyacrylic Acid.**

2,476,464—**Merck—Vitamin B_6 Intermediates.**

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Textbook of Anaesthetics, by R. J. Minnitt, M.D., Senior Honorary Anaesthetist, Royal Liverpool United Hospital, and John Gillies, M. C., J. V. Simpson Lecturer in Anaesthetics, The University of Edinburgh, Seventh Ed., 568 pp., The Williams and Wilkins Co., Baltimore, $8.

Much of the text of the previous edition of this work has been rewritten and a considerable amount of new matter has been added to make this Seventh Edition complete and up to date. Contents: General Anaesthetic Agents. General Principles of Inhalational Methods. Changes in the Blood Gases During Anaesthesia. Shock or Peripheral Circulatory Failure and Anaesthesia. Clinical Observation of the Patient. Preparation of the Patient. Premedication and Basal Narcosis. Posture of the Patient. Nitrous Oxide. Ethylene. Cyclopropane and Closed Circuit Carbon Dioxide Absorption Anaesthesia. Ethyl Ether. Di-Vinyl Ether. Ethyl Chloride. Chloroform. Trichlorethylene. Endotracheal Anaesthesi. Intravenous Anaesthesia. Curare. Anaesthesia for Dentistry. Analgesia and Anaesthesia in Obstetrics. The Abnormal Incidents of Anaesthesia. The Sequelae or Anaesthesia. Therapeutic Use of Oxygen, Etc., Choice of Anaesthetic. Choice of Anaesthetic (cont.). Regional Analgesia. Some Legal Aspects. Index.

Patent Law by Chester H. Biesterfeld, B. Ch. E., M.P.L., member of the New York and Delaware Bars, Second Ed., 267 pp., John Wiley & Sons, New York, $4.

The revisions in the second edition have been extensive. There has been an addition of recent decisions, arranged in groups to illustrate the various phases of the subject of invention according to the modern ideas of the courts. The chapter on "Uses" is entirely rewritten with a more complete list of authorities; also an article on "Products of Nature" has been added. The discussion of "Double Patenting" is restated; and that of "Disclaimer" has been redrafted in view of new decisions. In the chapter on "Infringement" an extensive insert presents the Supreme Court cases on the interpretation of patent claims. Because Congress, in 1946, abolished recovery of profits, the discussion of profits is omitted, and that of damages is given in greater detail. The chapter on "Trade Secrets" has been expanded to include a discussion of alleged rights in ideas, and the doctrine of "non-functional" features. The second edition of Patent Law, like the first, has been designed to afford the general reader a simple, understandable treatment of each of the principle subjects of the substantative law, supported by citations and quotations taken from court decisions.

Synthetic Aromatics, Perfumes, Isolates And Their Derivatives, by R. S. Colborne, G. E. C. Pitt, and B. Dudley Sully, British Technologists, 100 pp., Mimeographed Photo-Offset, Hobart Publishing Co., Washington, $6.

This is one of a series of special technical reports published with permission of the Office of Technical Services, Department of Commerce. It contains 17 process and flow sheets on the following subjects: Benzaldehyde and Benzoic Acid, Benzoic Acid, Benzyl Chloride, Benzyl Alcohol, Benzyl Benzoate, Benzyl Acetate, Cinnamic Aldehyde, Cinnamic Acid, Oxidation of Toluene to Benzoic Acid. Formulas and detailed process descriptions are given of: Amyl cinnamic aldehyde, Amyl salicylate, Anisaldehyde, Benzaldehyde, Benzoic acid, Benzyl alcohol, Benzyl benzoate, Benzyl chloride, Borneol, Bornyl acetate, Camphor (by-products), Chlor, Thymol, Cinnamic acid and aldehyde, Citral, Coumarin, Diacetyl, Ethyl vanillin, Flotation agents, Geraniol, Geranyl formate, Glyoxylic acid, Ionone, Ionone A and B and Extra, Ionone P, Iraldein (methyl ionone), Iraldoin T, Iso propyl chloride, Jasmone. Menthol, Menthol Schering, beta-methyl beta-phrnyl glycidic acid ethyl ester, Muscolid, Musk ambrette, Musk ketone, Musk xylol, Naphthyl methyl ketone, Nondadienol, Perfumery chemicals, Phenyl acetaldehyde, acetic acid, acetic acid ethyl ester, acetic acid methyl ester and phenyl propyl alcohol, Pseudo ionone, Terpinyl acetate, Terpin hydrate, Terpineol, Terpionlene, Thymol, Undecalactone, Vanillin.

Malignant Disease and Its Treatment, by Radium, by Sir Stanford Cade, K.B.E., C. B., F.R.C.S., M.R.C.P., Surgeon, Westminster Hospital, Mount Vernon Hospital and Radium Institute, Volume II, Second Ed., 430 pp., Illus., The Williams & Wilkins Co., Baltimore, $12.50.

This volume deals with malignant disease of the mouth, pharynx, larynx, and neck. In this anatomical area radiotherapy has contributed a great deal for the treatment of patients; it has extended the therapeutic range well beyond that of excisional surgery, but it has not displaced surgery, which still plays a very important part in the treatment. In the authors experience in them outh and pharynx, radium is a more reliable method of radiation than X-rays at the usual 200 kv. employed till now. Needling remains the best method as far as the tongue itself is concerned and wherever a lesion is accessible so that interstitial radium can be done adequately. Teleradium is the choice for tumors of the pharynx and larynx. A combination of various techniques and of radium and X rays is indicated in some cases. The technical and physical data have been revised with the help of Dr. C. W. Wilson, Physicist at the Westminster Hospital.

Biochemical Preparations Vol. I, by Herbert E. Carter, Editor-in-Chief, 76 pp., John Wiley & Sons, Inc., New York, $2.50.

Biochemical Preparations is an attempt to do for biochemistry what Organic Synthesis did for organic chemistry. This work will cover preparations of compounds which are not readily available commercially and which can be prepared from available starting materials. In addition, techniques of general application in preparative work will be included. Isolation methods will be emphasized, but if a compound used by biochemists is best obtained by synthesis, the synthetic method will be published. All methods included in the series will be checked and re-checked to insure their accuracy. The editors intend to publish a new volume of Biochemical Preparations every 12 to 16 months.

YOUR TRADE-MARK RECORD

By JOHN H. GRAHAM
International Patent and Trade-Mark Consultant

Graduation Day for Cosmetics

For many years class 6 of the trade-mark classification has been the recipient of all chemicals and chemical compositions, whether drugs, cosmetics, potions or polishes. The drug section and the cosmetic section have together contributed a very large percentage of marks to this class. At last the Patent Office has decided that cosmetics and drugs should graduate to their own seperate classes. Their slumming days are over and the dignity and pride of seclusion are to be given them.

According to the outstanding proposals of changes to the trade-mark rules the following will take place: Class 18 (at present blank) will be established for "Medicines and pharmaceutical preparations." Class 51 will be established for Cosmetics and toilet preparations. Class 52 will be established for detergents and soaps. Old Class 4 will be reduced to "Abrasives and polishing materials." Old class 6 will be reduced to "Chemicals and chemical compositions."

These changes will be helpful. Particularly in searching to see what has been registered in the past it will be much easier to stick to your own type of goods. Conflict between metal polish and a high grade perfume is not very likely. Yet heretofore we have had to search all chemicals in class 6.

Some confusion may be expected. Marks registered prior to the changes contemplated, will obviously stay in their old class. I assume that when they are renewed, the new classification will apply, either automatically or at the request of the trade-mark owner. But any change has its growing pains. The medication in classes will not cause extra registrations to become necessary to cover all your goods, except in a few isolated cases. Some house marks may cover, besides toilet preparations and cosmetics, such goods as castor oil or olive oil, which would no longer be in the new class 51. These will be few and far between. It will be some time before the changes are adopted. Probably late in the year. When they are, these columns will post you, since the classes referred to in the trade-mark listings which follow hereafter monthly, will be changed to use the new classes. Once the new system is under way, it should be better than the present outmoded classification, which stems from our first trade-mark Act in 1883.

It is a very good sign to see the many changes that are being made in the Patent Office. Certainly, the country which contributes the greatest amount of inventions and more trade-marks than any other country in the world, should have the best organized, best equipped Patent Office, both for our internal industrial health and our prestige with other nations.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Alapex—VI—H—561,562
William R. Ethridge, Alliance, Ohio
Ser. July 16, 1948 D. U. Sept 1, 1946

Armand—VI—BC—559,475
The Armand Co., Des Moines, Iowa
Ser. May 21, 1948 D. U. May 1946

Bocalav—VI—K—556,385
S. H. Warfman, dba Bocalav Co., N. Y., N. Y.
Ser. May 6, 1948 D. U. June 1936

Bombi—VI—C—549,498
Bombi, Inc., West Haven, Conn.
Ser. Feb. 12, 1948 D. U. Oct. 3, 1945

Calvifin—VI—H—557,298
Nadal Antelmo Jamet, Habana, Cuba
Ser. May 18, 1948

Color Stars—VI—C—567,865
Richard Hudnut, N. Y., N. Y.
Ser. Oct. 29, 1948 D. U. Oct. 13, 1948

Dance Time—VI—B—538,162
Parkinson Lecourt Co., Inc., N. Y., N. Y.
Ser. Oct. 17, 1947 D. U. Oct. 14, 1947

Dar-Ling Oil—VI—TM—563,503
Amy T. Simpson, Orange, Mass.
Ser. Aug. 16, 1948 D. U. Oct. 10, 1907

Eau de France—VI—B—552,830
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Mar. 24, 1948 D. U. Feb. 13, 1948

Fitch's—VI—H—538,901
The F. W. Fitch Co., Des Moines, Iowa
Ser. Oct. 24, 1947 D. U. Since 1893

Gilta—IV—A—558,646 (And Des.)
Archie Galanter, Brooklyn, N. Y.
Ser. June 7, 1948 D. U. May 10, 1948

House of Akabar—VI—C—553,820 (And Des.)
Eleanor M. D'Aoust, Phila, Pa.
Ser. Apr. 5, 1948 D. U. Apr. 2, 1948

Love in Paris—VI—BC—507,195
M. Landon, dba Saint-Cyr. N. Y., N. Y. and Paris, France
Ser. Aug. 10, 1946 D. U. Since 1926

Lucas—VI—T—557,289
J. Lucas, dba Lucas Kil-Tone Co., Phila., Pa.
Ser. May 18, 1948 D. U. Jan. 1923

Mary Nolan—VI—CE—533,680
Mary Nolan, Inc., N. Y., N. Y.
Ser. Sept. 6, 1947 D. U. Oct. 1, 1930

Nuit de Longchamp—VI—BC—517,427
Parfumerie Lubin Societe Anonyme, Paris, France
Ser. Feb. 13, 1947 D. U. May 10, 1935

Oberon—VI—B—553,096 (And Des.)
Georges Fuchs, Ltd., N. Y., N. Y.
Ser. Mar. 26, 1948 D. U. Mar. 8, 1948

Parlay—VI—H—561,140
The Pharma-Craft Corp., N. Y., N. Y.
Ser. July 10, 1948 D. U. May 25, 1948

Pedi-Glo—VI—F 10—564,761
M. J. Canning, dba Pedi-Glo Products Co., Stockton, Calif
Ser. Sept. 7, 1948 D. U. Mar. 1, 1938

Q-Bec—VI—T—560,140
Ver-E-Gud Products Inc., N. Y., N. Y.
Ser. June 24, 1948 D. U. May 1, 1948

Radelle—IV—A—566,690
Commercial Labs., Inc., N. Y., N. Y.
Ser. Oct. 8, 1948 D. U. Aug. 19, 1948

Redder Than—VI—C—533,867
Lady Esther, Ltd., Chicago, Ill.
Ser. Sept. 9, 1947 D. U. July 11, 1947

Rose Elizabeth—VI—CE—558,878
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. June 10, 1948 D. U. May 3, 1948

Sachet by the Yard—VI—C—567,017 (And Des.)
Bergdorf & Goodman Co., N. Y., N. Y.
Ser. Oct. 15, 1948 D. U. Oct. 8, 1948

Schratz Bubbling Bath Handees—VI—A—519,698
Schratz Products, Detroit, Mich.
Ser. Mar. 27, 1947 D. U. Feb. 7, 1947

Stim—VI—H—513,991
Standard Labs., Inc., N. Y., N. Y.
Ser. Dec. 10, 1946 D. U. Dec. 31, 1939

"Tempering"—VI—H—561,000
Genii Inc., St. Paul, Minn.
Ser. July 9, 1948 D. U. July 6, 1948

Toni—IV—A—559,982
The Toni Co., St. Paul, Minn.
Ser. May 7, 1948 D. U. May 27, 1947

Tres en Forme—VI—BC—561,037
Jeanne Piaubert, Paris, France
Ser. July 9, 1948 D. U. Dec. 18, 1946

Your Uncle Dudley's—VI—G—528,390
Troup Whitehead, dba Your Uncle Dudley's, San Antonio, Tex.
Ser. July 11, 1947 D. U. Jan. 1, 1937

Act of 1946

The following Trade-Marks have been recently republished under the terms of the above (Lanham Act). No opposition can be filed against them but they are all subject to cancellation proceedings.

Canthrox—VI—H—136,579
Reg. Nov. 2, 1920 To H. S. Peterson & Co.,
Rebup. by Consolidated Royal Chem. Corp., Chicago, Ill.

Creme Lavant Djer Kiss—VI—C—259,124
Reg. July 23, 1929 To A. H. Smith Co.
Repub. by Universal Labs., Inc., N. Y., N. Y.

Down Beat—VI—H—389,819
Reg. Aug. 19, 1941 To A. Di Frances, Milwaukee, Wis.
Repub. by registrant

E—IV—A—186,270 (And Des.)
Reg. July 8, 1924 To The Eavey Co., Xenia, O.
Repub. by registrant

Helen of Troy—VI—C—254,135
Reg. Mar. 12, 1929 To The Armand Co., Des Moines, Iowa
Repub. by registrant

Jasmimque—VI—M—229.695
Reg. July 5, 1927 To Albert Verley, Inc.
Repub. by Albert Verley & Co., N. Y., N. Y.

Kings Men—IV—I—414,211
Reg. May 29, 1945 To "42" Products, Ltd., dba Windsor House, Ltd.
Repub. by "42" Products, Ltd., Los Angeles, Calif.

Medol—VI—T—369,756
Reg. Aug. 1, 1939 To Shell Oil Co., Los Angeles, Calif.
Repub. by registrant

Packer's—IV—A—430,785
Reg. June 24, 1947 To Packer's Tar Soap, Inc., Mystic, Conn. And N. Y., N. Y.
Repub. by registrant

Packer's Cutaneous Charm—VI—C—53,525
Reg. June 5, 1906 To E. A. Olds
Repub. by Packers Tar Soap, Inc., Mystic, Conn.

Packer's Tar Soap—IV—A—430,786
Reg. June 24, 1947 To Packer's Tar Soap, Inc., Mystic, Conn.
Repub. by registrant

Pacquin's—IV—A—249,628
Reg. Nov. 20, 1928 To Pacquin, Inc.
Repub. by Pacquin-Lester Co., Litchfield, Conn.

Pink Frosting—VI—C—439,702
Reg. July 13, 1948 To The Andrew Jergens Co., Cinn., Ohio
Repub. by registrant

Puritan—IV—A—81,356
Reg. Mar. 28, 1911 To Puritan Soap Co.
Repub. by Puritan Soap Co., Inc., Rochester, N. Y.

Queen Anne—VI—C—239,254
Reg. Feb. 28, 1928 To Peoples Drug Stores, Inc., Washington, D. C.
Repub. by registrant

Scalptone—VI—H—286,424
Reg. Aug. 25 1931 To The Packer Mfg. Co., Inc.
Repub. by Packers Tar Soap, Inc., Mystic, Conn.

Seda—VI—CEH—271,227
Reg. May 27, 1930 To G. Schicht, A. G.
Repub. by Severoceske Tukove Zavody, Czechoslovakia

Seda—IV—A—264,330
Reg. Nov. 26, 1929 To G. Schicht, A. G.
Repub. by Severoceske Tukove Zavody, Czechoslovakia

Septo-Loris—VI—K—409,934
Reg. Oct. 31, 1944 To Katz Drug Co., Kansas City, Mo.
Repub. by registrant

Sunglow—VI—E—249,641
Reg. Nov. 20, 1928 To S. Bonat & Bro.
Repub. by Bonat & Bonat, Inc., N. Y., N. Y.

Un Peu D' Elle—VI—BC—441,147
Reg. Oct. 26, 1948 To Henri Bendel, Inc., N. Y., N. Y.
Repub. by registrant

Vapona—VI—T—369,758
Reg. Aug. 1, 1939 To Shell Oil Co. San Francisco, Calif.
Repub. by registrant

War-Jon—VI—M—393,245
Reg. Jan. 27, 1942 To Mary Johnson, dba War-Jon Products Co., Brooklyn, N. Y.
Repub. by registrant

Whiz—VI—T—419,457 (And Des.)
Reg. Feb. 19, 1946 To R. M. Hollingshead Corp., Camden, N. J.
Repub. by registrant

Zip-Shave—IV—I—252,028
Reg. Jan. 22, 1929 To Jean Jordeau, Inc. South Orange, N. J. and N. Y.
Repub. by registrant. Present address South Orange, N. J.

Sensitization to Penicillin

In the *Ohio State Medical Journal* 145:131, 1949), M. D. Feldman groups the adverse symptoms produced by penicillin into the following categories: It may act as a direct toxin or primary irritant; it may act as an antigen and stimulate antibody formation; it may induce a Herxheimer reaction; it may induce "therapeutic paradox;" it may induce organism resistance. The allergic reactions to penicillin, produced because of its antigenic properties, can be divided into several types: (1) allergic dermatitis of the contact type; (2) drug and serum-like reactions; (3) erythematovesicular group of reactions; (4) tuberculin type of reaction; (5) Arthuslike reactions. The allergic responses to penicillin may be severe and temporarily disabling. Spontaneous desensitization may occur. Feldman feels that a plea should be made against the indiscriminate use of penicillin. It is a highly sensitizing agent, and when it is used in minor disturbances, not only may these reactions result, but the patient may also become sensitized to future therapy with this valuable antibiotic agent.

Bandage Aid

Where Tincture of Benzoin is used as a skin protectant and base for surgical tape, pressure and support bandages, G. L. Phillips (*Bull. Amer. Soc. Hospital Pharm.* 6:118, 1949) suggests that a much less expensive tincture of rosin may be used. This rosin tincture is made as follows:

Rosin N.F. VIII	**450.0 Gm.**
Basic Fuchsin	**0.15 Gm.**
Isopropanol 99%, to make	**4000.0 cc.**

The fuchsin dye helps to show area of coverage. Alcohol U.S.P., if tax free, may be substituted for the isopropanol at no increase in cost to produce a more pleasing product as to odor. The rosin tincture is not suitable, of course, as a replacement for the benzoin tincture for inhalant use.

Adrenalin Cream in Rheumatism

A 1:5,000 adrenalin cream made with a vanishing cream base has been found by Moss (*Med. World* April 15, 1949, p. 244 to be a valuable preparation for treating cases of chronic rheumatism where massage is indicated. A little of the cream is massaged firmly and deeply into the affected muscles for a few minutes. An analysis of 106 patients treated during six months shows that their ages ranged from fifteen to eighty years, and their conditions included lumbago, fibrositis, migraine (possibly due to fibrositis of the scalp) and perarthritis. Apart from early cases of osteo-arthritis, which do not respond to the treatment there was one failure. All other cases had great relief after the first treatment and were almost symptom-free after a few treatments. The drug was ineffective when incorporated in other ointment bases.

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Compounder's Corner

Soap and Soapless Shampoos

According to a note in *The Perfumery and Essential Oil Record* (40:168, 1949), the main requirements of a modern shampoo are that it should clean the hair and scalp thoroughly, without causing irritation or too effective degreasing, that the hair should be left soft and lustrous, without being made brittle. The shampoo should not be excessively alkaline and so that it can be effective in hard water it should give no precipitate with magnesium or calcium salts. Most people demand a lather with their shampoos because they have always been led to believe that lather is a measure of efficiency. This is not so prevalent now, however, and many people have been educated by modern advertising of synthetic detergents to realize that it is not only lather which gives good shampoos.

Soap shampoo powders consist essentially of soap powder with a diluent such as sodium carbonate or sesquicarbonate, a water softener such as borax or trisodium phosphate and a lathering agent such as saponin. Perfume is added and some form of tinting powder such as henna or camomile is frequently included to cater particularly for would-be brunettes or blondes. Thus a typical basis for soap shampoo powder may be taken from the formula:

Powdered soap	35
Saponin	5
Sodium sesquicarbonate	45
Borax	5
Trisodium phosphate	5
Henna or Camomile powder	5
Perfume	**sufficient**

It is pointed out that soapless shampoos are becoming increasingly popular, largely because it is fairly well known that soap, on hydrolysis in water, sets free a certain amount of alkali, which tends to make the hair brittle. For these shampoos one or other of the synthetic detergents is generally used with sufficient filler and perfume to make up a respectable sized packet. The sulphated fatty alcohols are often used, particularly sodium lauryl sulphate, which is readily available. About 10 Gm. of this material is sufficient for each shampoo and it is only necessary to add perfume and a harmless, neutral filler such as anhydrous sodium sulphate. When a liquid soapless shampoo is required, triethanolamine lauryl sulphate is often used, since the sodium salt is insufficiently soluble in water. The triethanolamine lauryl sulphate should be diluted with about an equal part of water, colored and perfumed, the result being a very good shampoo of pleasing appearance.

Carboxymethylcellulose in Lotions

In the *Archives of Dermatology and Syphilology* (59:339, 1949), E. S. Bereston explains how he became interested in the possiblity of using carboxymethylcellulose in dermatology, particularly in lotions when oil in water emulsions are needed. After many trials, he compounded a lotion consisting of the following formula in aqueous solution: sodium carboxymethylcellulose, 0.75 per cent; non-aethylene glycol monolaurate, 1 per cent, and triethanolamine, 1 per cent. In this formula the carboxymethylcellulose acts as a film-forming agent and stabilizes the emulsion. The nonaethylene glycol monolaurate was included because it emulsifies petrolatum, while the triethanolamine was added to emulsify the fixed oils, such as olive oil. The lotion thus compounded is greaseless, odorless, colorless and film forming. It adheres well to the skin. It may be employed as a vehicle for all types of drugs used in dermatology, for it is compatible with oils, solids and liquids except for the soluble salts of zinc and aluminum; this means that Burow's solution (solution of aluminum acetate N. F.) cannot be incorporated with it. The lotion is easily removed from the skin with water. Patch tests on several hundred people gave no positive reactions; in clinical use in the past year and in private practice no contact dermatitis from its use has been seen.

Dutch Tooth Paste Patent

In the tooth pastes described in Dutch Patent 62,220, granted to Cosmetiche Febrick "Prodenta," the polishing components consist of lactose or latosates, such as calcium lactosate. A typical tooth paste, as given in the patent, calls for the use of:

Lactose	45.0	**per cent**
Water	27.5-43.9	" "
Thickener (Methyl cellulose or tragacanth)	3.0- 5.0	" "
Glycerine	5.0-10.0	" "
Soap	2.0-10.0	" "
Aromatizer	1.0- 2.0	" "
Sweetener	0.1- 0.5	" "

Preferred Liquid Brilliantines

In another of the tests to determine public preferences, the editors of the Belgian publication, *The Alchimist* (3:107, 1949), submitted a series of liquid brilliantines, prepared according to formulas taken from the literature, to the appraisal of a number of men and women. From this test it appeared that there does not exist any liquid brilliantine capable of suiting everyone's taste. This is not only due to the fact that tastes largely differ, but mainly to the large variety of hair types. It is quite normal that persons with very dry hair prefer other brilliantines than do individuals with rather oily hair. Hence, not one, but four preparations were listed as producing satisfactory results. The surprisingly simple formulas for these liquid brilliantines, which should be suitably perfumed, are as follows:

I

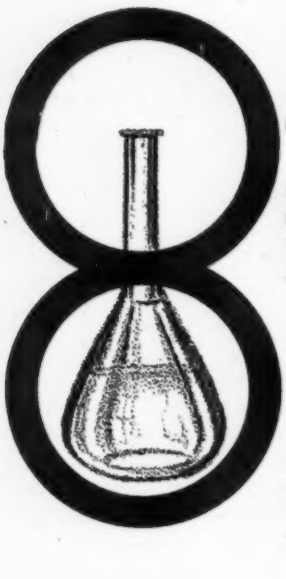
Mineral oil	800
Sweet almond oil	200

II

Mineral oil	850
Soluble castor oil	150

III

Pharmaceutical castor oil	500
Alcohol (95°)	500



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IV

Mineral oil	750
Deodorized kerosene	250

A poor rating was given to a liquid brilliantine based solely on mineral oil and to one consisting of pharmaceutical castor oil and alcohol mixed in a ratio 1:3.

Locust Bean Gum

The virtues of locust bean gum as a modern thickening agent for use in foods, drugs, cosmetics and other products are detailed by G. Griffiths (*Manuf. Chem & Manuf. Perf.* 20:321, 1949). He notes that locust bean gum, carob gum or gum gatto is obtained from the seeds of *Ceratonia siliqua*, a tree indigenous to the coastal regions of the Mediterranean countries and cultivated chiefly in Spain, Portugal, Cyprus, Palestine, and the Balearic Islands. The history of the cultivation of the tree dates back to several centuries B.C., for its fruit had long been valued as a food for animals and, at times, for humans.

Because its thickening power is the most valuable characteristic of locust bean gum, the viscosity of its solutions is its most important physical property. As a thickening agent it is about five times as effective as starch, weight for weight, and twice as effective as many grades of gum tragacanth.

There is a simple but definite technique for preparing solutions of locust bean gum. It is useless to stir the gum straight into hot water or to paste the gum out in cold water first and then dilute with hot water. In either case gelatinized lumps of solid gum are formed which are difficult to disperse. The gum powder should be stirred into the full amount of cold water and then brought to the boil with stirring. For most purposes a 1 to 2 per cent solution prepared in this way is sufficient. Preparation of more viscous solutions and jellies may be made by stirring 3 to 4 per cent of gum into a 0.25 per cent borax solution at 80°C. and then quickly adding dilute acetic acid until the solution is just acid to litmus paper. The borax prevents the gum from dissolving until the *p*H of the solution has been lowered to a sufficient degree. A third method of preparing a solution is to mix the gum into a pourable cream with alcohol and add this to cold water. An even suspension of the gum is obtained which may be boiled or left to dissolve in the cold. Solutions of the gum are stable for from two to five days, and if they are to be kept for longer periods a preservative is necessary; 0.25 per cent of cresylic acid, formalin, or chlorphenols is quite effective.

Griffiths cites the work of Knight and Dowsett on the value of locust bean gum as a replacement for gum tragacanth in drugs and cosmetics thus, a concentrated mucilage which they developed and found satisfactory can be made from:

Locust bean gum	4.00 Gm.
Alcohol	10.00 cc.
Benzoic acid	0.15 Gm.
Water, to make	100.00 Gm.

The gum, acid and alcohol were mixed and the water added with brisk stirring and the mixture heated on the water bath for half an hour. They found this jelly useful for lozenge making, particularly for iodized throat lozenge, since the absence of starch, present in gum tragacanth, prevented discoloration.

A good universal pill excipient was prepared from:

Locust bean gum	20.0
Glycerine	60.0
Water	20.0
Glucose	100.0

The barium sulfate, it was found, remained well suspended in the following "Kesbar" cream for radio-graphic work:

Barium sulphate	50.00 Gm.
Vanillin	0.03 Gm.
Gluside (saccharin)	0.01 Gm.
Locust bean gum mucilage (1.25%)	35.00 cc.
Benzoic acid	0.15 Gm.
Water, to make	100.00 cc.

Illustrative of the use of the gum in cosmetics is the following lily toilet cream:

Locust bean gum	10.0 Gm.
Glycerine	120.0 cc.
Water	240.0 cc.
Lily perfume	5.0 cc.
Alcohol (90%)	20.0 cc.
Benzoic acid	0.5 Gm.

The gum and glycerine were mixed, then the water mixed in and the mixture heated at 100°C. for one-half hour. After cooling, the mixed perfume, spirit and acid were worked in.

Electric Shaving Aid

Rather interesting preparations, to be used with electric shaving equipment, are described in Dutch patent 62,708, granted to N. V. chemische Fabriek "Naarden." These products consist of a mixture of an alkyd resin and acetone-glycerine, dissolved in alcohol and perfumed. In an example, a base mixture is composed of:

Alkyd resin	500 Gm.
Acetone-glycerine	450 Gm.
Perfume	50 Gm.

To make the finished shaving aid, 15 Gm. of this mixture is dissolved in one liter of 60 per cent alcohol.

Brochure on White Oils and Petrolatum

A large 16-page brochure on Penn Drake White Oils and Petrolatum has been published by Pennsylvania Refining Company and is now available. The brochure outlines the wide usage of white oils for pharamaceutical and cosmetic products, and the wide application of petrolatum for cosmetic and medicinal preparations. The former Penn Drake product is rich and full-bodied; far surpasses U.S.P. requirements; is superior as a therapeutic oil; and is absolutely tasteless, colorless and odorless. Extensive treatments and filtrations remove unsaturates and other impurities thus giving the product a remarkable purity under every test. Penn Drake Petrolatum meets the most stringent medicinal and cosmetic standards. They are pure, odorless, tasteless, and all grades resist oxidation, heat and light. Made from the finest pure Pennsylvania crude oil, which is carefully and skillfully refined by an exclusive process, a wide selection of standard and special colors is available. The brochure lists complete specifications of the various Penn Drake White Oils and Petrolatum. Free copies may be obtained from Pennsylvania Refining Co. at Butler, Penna; Cleveland 4, Ohio; or Edgewater, N. J.

Perfumed Bath Salts

According to an item in *The Chemist and Druggist* (152:27, 1949) a simple formula for perfumed bath salts calls for a suitably perfumed and colored combination of sodium sesquicarbonate and sodium perborate, used in a ratio of 16:1. A suitable lavender perfume for the bath salts is made from:

Oil of lavender	8
Oil of rose geranium	2
Tincture of musk	2
Tincture of civet	1
Tincture of benzoin	2
Oil of bergamot	1
Isopropyl alcohol	4

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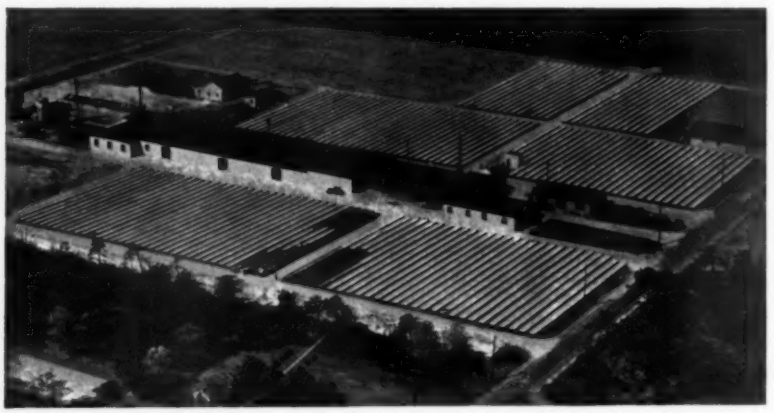

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READERS' QUESTIONS

ANTIPERSPIRANT CREAM: We are interested in obtaining a formula for an antiperspirant cream. If at all possible, we should prefer one with a glyceryl monostearate base. London.

Such a product can be made as follows:

Acid-stable glyceryl monostearate	170
Spermaceti	90
Glycerine	39
Distilled water	380
Preservative	1
Aluminum sulfate	150
Distilled water	150
Titanium dioxide	20

Dissolve the aluminum sulfate in 150 parts of water then stir the titanium dioxide into the solution. Heat the glycerine and the 380 parts of distilled water, plus the preservative, in the mixing kettle to 90°C. Heat the glyceryl monostearate and the spermaceti to the same temperature and introduce into the water phase with fairly vigorous agitation. Stir until the emulsion is well formed and almost cool, then add gradually the mixture of aluminum sulfate, titanium dioxide and distilled water which was previously prepared.

"MEDICATED" VANISHING CREAM: I would like to know if you could send me a formula for an inexpensive, medicated vanishing cream that is used in barber shops. The cream must have a vanishing cream base, and must be of a hard consistency. Jackson Heights.

I am not quite sure as to what is meant by a medicated cream for barber shops. However, I think that you can prepare a suitable "medicated" product by replacing the perfume in a standard formula for a vanishing cream with essential oils or similar compounds having "medical" properties. Among the suitable oils might be eucalyptol, or the like. A little thymol or a little chlorothymol will also be useful in creating the desired effect.

LIQUID CREAM SHAMPOO: We would like to have a simple formula for making a liquid cream shampoo. St. Louis.

A liquid cream shampoo can be made along the following lines:

Cetyl alcohol	15 Gm.
Propylene glycol	10 Gm.
Beeswax	2 Gm.
Sodium lauryl sulfate	2 Gm.
Water, to make	100 cc.

Melt the fats and the propylene glycol and bring to 65°C. Dissolve the sodium lauryl sulfate in the water and bring to 65°C. Under rapid agitation add the water to the fats. When the emulsion is complete add 50 Gm. more of sodium lauryl sulfate dissolved in enough water to bring the total volume to 500 cc.

EMBALMING PREPARATIONS: Do you have information on products used by embalmers, such as embalming fluids and make up tinting compositions, and the like? Memphis.

Perhaps the best known and frequently cited embalming fluid is the one approved some years ago by the National Funeral Directors' Association of America. This is made from:

Solution of formaldehyde	11 lb.
Glycerine	4 lb.
Sodium borate	2½ lb.
Boric acid	1 lb.
Potassium nitrate	2½ lb.
Eosin, 1% solution	1 oz.
Water, to make	10 gal.

The sodium borate, boric acid, and potassium nitrate are dissolved in six gallons of water. The glycerine is added; then the solution of formaldehyde and lastly the eosin solution are mixed in. Finally, water is added to make 10 gallons.

With respect to cosmetics used by embalmers, I should like to point out that a variety of products are used in this profession. However, as an example, I cite the following formula for a so-called finishing cream:

Glycol stearate	12 parts
Glyceryl tristearate	5 "
Rose oil	2 "
Glycerine	3 "
Titanium dioxide	1 "
Water	78 "

DATA SOURCE ON AMMONIATED TOOTH POWDER: Could you give me the name of the original publication in which the so-called ammoniated tooth powders were described? I refer to those which contain both an ammonium compound and urea. New Rochelle.

The original article was published by R. G. Kesel and his associates and appeared in the *American Journal of Orthodontia and Oral Surgery*, Vol. 33, page 80 in 1947. It was abstracted quite completely in the October 1947 issue of DRUG & COSMETIC INDUSTRY.

PINE OIL EMULSION CONCENTRATE: Can you give me information on the composition of pine oil emulsion which, when diluted with water, makes a general purpose disinfectant? Los Angeles.

Emulsified pine oil disinfectants contain approximately 70 per cent of steam-distilled pine oil, about 20 per cent rosin soap and not more than 10 per cent of water and other inert materials. According to the "National Formulary," pine oil emulsion concentrate is a concentrate prepared from pine oil and water, using soap, sulfonated oil, or other suitable emulsifying agent, thus allowing a broader selection of emulsifier.

Advancing Therapy

Aminophyllin in Dysmenorrhea

According to H. E. Anderson and A. R. McIntyre (*Nebraska State Med. J.* 34:17, 1949), primary dysmenorrhea is characterized by pelvic pain of various degrees unassociated with any demonstrable pathologic changes in the pelvis. This periodic pain is frequently accompanied by nausea and vomiting as well as severe headache and usually backache. In treating this symptom complex, they tried aminophylline because of the effect of this drug on smooth muscle. A total of 100 cases were observed. The tablets used contain a combination of aminophylline, caffeine, acetophenetidin, acetylsalicylic acid and sodium iron pyrophosphate. The patient was advised to take two tablets every two hours with a maximum of five tablets per day. Placebos given to exclude the psychic element did not produce the same effect. Aminophylline alone produced slightly less favorable results than did the combination of drugs. The tablets containing the combination of drugs produced satisfactory results in 70 per cent of the cases and partial relief in an additional 16 per cent; the remaining 14 per cent obtained no relief.

New Ergot Derivative

Results of studies on dihydroergocornine, a new hydrogenated derivative of ergot, are reported by R. H. Goetz in the *Lancet* (1:510, 1949) The durg may be given by slow intravenous injection, by intravenous drip, intramuscularly, subcutaneously or intravenously. In this investigation, it was given to 37 persons with normal blood pressure and 40 patients with hypertension. For normal persons, the usual dose was 0.3 to 1.0 mg. intravenously and for hypertensives 0.1 to 0.5 mg. Goetz points out that as sensitivity to the drug varies considerably, it is essential to start with small doses (0.1 mg.) and to increase subsequently. Side effects after the large doses included nausea, vomiting and epigastric pain. Small doses (0.2 to 0.3 mg.) given to patients with hypertension constantly produced a fall in blood-pressure. Consideration has been given to the possibility of keeping the blood-pressure depressed for a prolonged period by giving an initial injection followed by a maintenance dose. Of all the sympathicolytic drugs which have been reported and tested by Goetz, dihydroergocornine produces the least involved reactions in doses which lower the blood pressure considerably. It produces none of the side-effects of tetraethylammonium chloride.

B Vitamins vs Anemic Glossitis

It is pointed out by A. Brown (Brit. Med. J. 1:704, 1949) that glossitis is a common feature of the sprue syndrome and of many deficiency states such as pellagra. Its occurrence has been attributed to deficiency of specific vitamins such as nicotinic acid and riboflavin. The fact that the sore tongue of the pernicious anaemia syndrome is indistinguishable from that occurring in well-recognized nutritional deficiencies suggests that in pernicious anaemia it may again be due to a vitamin deficiency, and that it may be corrected by appropriate treatment with one or more of the members of the vitamin B complex. In his report, seven patients with Addisonian pernicious anaemia are described each of whom had a sore, red, raw-looking tongue. One also had angular stomatitis and vascularization of the corneae. In each case it was found possible to control these changes with a single member of the vitamin B complex in pure form. Four cases of glossitis responded to calcium pantothenate, and one each to nicotinic acid and folic acid. One case responded first to nicotinic acid and later to riboflavin. The patient with glossitis, angular stomatitis, and vascularization of the corneae responded to riboflavin.

In considering the significance of these findings, it is suggested that the epithelial changes described reflect a breakdown in some metabolic system which may be similar to that responsible for the megaloblastic marrow and the neurological complications of pernicious anaemia.

Malaria Treatment

According to the *Pharmaceutical Journal* (163:51, 1949) the (British) Ministry of Transport has issued a new notice to ships' surgeons in order to acquaint them with the most recent recommendations on the prevention, diagnosis and treatment of malaria. References are made to the value of Paludrine: more experience in the treatment of overt attacks is necessary before its optimum dosage as a schizonticidal drug for all strains of the parasite is finally determined. The immediate clinical response sometimes appears to be slower than with mepacrine or quinine, but the ultimate results compare very favourably. The therapeutic course of Paludrine consists of 0.1 to 0.2 Gm. three times daily after food for 10 days.

For the oral use of quinine a mixture is suggested consisting of:

Quinine sulfate or hydrochloride	**10 grains**
Citric acid	**30 "**
Magnesium or sodium sulfate	**20-60 "**
Syrup, to make	**1 fl. oz.**

It is stated in the notice that sugar-coated pills or tablets should never be used and the solubility of pills or tablets (always made with the more soluble salts) should be tested periodically by "placing one in a glass of water." As an alkaline mixture, to be given in order to help absorption and possibly to enhance the specific action of antimalarial drugs, it is suggested that repeated doses of the following be administered:

Sodium bicarbonate	**60 grains**
Sodium citrate	**40 "**
Calcium carbonate or chloride	**3 "**
Water, to make	**1 fl. oz.**

Antihistaminic Aerosols for Asthma

The results of systemic administration of antihistaminic preparations for the treatment of bronchial asthma have been disappointing. Of interest, therefore, is the preliminary report of L. L. Friedman (*South. Med. J.* 42:491, 1949 on the results achieved with the use of aerosol "Benedryl," a well known antihistaminic drug. "Benadryl" solution containing 10 milligrams per cubic centimeter was used exclusively in this study, and the aerosol was delivered by means of a nebulizer. From ten to fifteen minims of this solution was administered in each treatment. In the presence of significant infections, penicillin or other antibiotic agents were added to the aerosol solution. All of the twelve patients studied were benefited by this therapy. Acute attacks were easily terminated and, frequently, with as little as seven to eight minims of the aerosol. Prophylactic use of the drug in this fashion has either entirely prevented acute attacks or increased the interval between attacks and decreased their severity. The treatment is unusually free of undesirable side reactions. Two patients experienced headaches, and one complained of a peculiar taste and dry sensation in the mouth. So far no resistance has developed following the prolonged use of aerosol "Benadryl." Two patients, however, following repeated aerosol "Benadryl" administration, did require slight dosage increases in order to maintain their original level of satisfactory symptomatic improvement with this form of anti-asthmatic therapy.

The action of the drug usually manifests itself in eight to ten minutes. Dyspnea is relieved promptly. Wheezing is much diminished or disappears entirely. Tenacious pulmonary secretions become more watery. As a result, useless exhausting cough is converted to a productive cough which eventually subsides completely.

Depot Effect with Testosterone

A stable preparation of testosterone that permits continuous slow absorption from the site of injection is described by Carlinfanti and his associates (*Lancet* 1:479, 1949). The preparation is made by adding slowly, with constant stirring, to a solution of 1 Gm. crystalline testosterone (m.p. 154.5° C.) in 10 mils 96 per cent ethyl alcohol 20 mils of an aqueous solution of aluminium phosphate, 7 mg. per mil. It has the advantage of reducing the frequency of injections to one month or less.

Carbon Tetrachloride for Herpes Zoster Pain

To the various methods for relieving the pain of herpes zoster may be added the beneficial action of carbon tetrachloride. G. F. Fasting (*New Orleans Med. & Surg. J.* 101:378, 1949) has reported a simple procedure utilizing carbon tetrachloride which is applied topically to skin areas suffering from pain and pruritus. Carbon tetrachloride is a fat and lipoid solvent resembling chloroform in anesthetic and toxic properties. The relief of pain obtained appears to result from a direct action on the peripheral nerve endings. Carbon tetrachloride in contrast to chloroform does not cause blistering of the skin. As a non-inflammable and non-explosive solvent, heavier than air, it has advantages over ether and benzene for cleansing the skin, removing adhesive and acting as a disinfectant. A few individuals unfortunately will be found skin sensitive to this solvent. Not a single case of carbon tetrachloride poisoning has been encountered in the literature where skin penetration was the exclusive mode of entry or contract.

It has been found that one ounce of carbon tetrachloride is sufficient for the rapid sponging of an entire arm and the adjoining pectoral and scapular surfaces. Only a small amount of the solvent need make intimate contact with nerve endings and other absorptive structures of the skin for adequate clinical response.

Fasturg feels that the simplicity of this method, combined with the features of cleansing and antisepsis should be an inducement to try carbon tetrachloride as a first step in the treatment of herpes zoster. It in no way precludes or interferes with any other type of treatment.

Moccasin Venom for Herpes Zoster

The preliminary report by C. C. Dennie, D. B. Morgan and F. P. Coombs (*J. Investig. Dermat.* 12:153, 1949) indicates the moccasin venom may have an important place in the treatment of herpes zoster. In their investigations, 18 of 20 cases of herpes zoster showed some improvement with intradermal injections of moccasin venom. Four patients recovered dramatically, and none of them required more than four days for complete cure and relief of pain. Corneal involvement is rapidly checked, so that scarring is minimal if ulceration has already occurred. Reactions from moccasin venom are usually local and are not severe enough to be a contraindication in any patient with herpes zoster.

Although they do not claim that moccasin venom is a specific remedy for herpes zoster, they do feel that it has given the best results of any single drug that they have so far encountered in the treatment of this condition. Two of their patients received no relief from the severe pain accompanying this disease, although the drying and healing of the vesicles and bullae was probably shortened by a few days from the average healing time.

Antibacterial Agents from Oils

In the Paris Letter of the *J. A. M. A.* (140:642, 1949) it is reported that J. Solomides of the Pasteur Institute, after noting the remarkable effect of cod liver oil distillate on burns, eczema and certain dermatoses of microbiologic origin, has studied the bactericidal properties of distillates of other oils. The first results show that completely disacroleined castor oil distillate possesses potent bactericidal properties against the tubercle bacillus, non-acid-resisting gram-positive and gram-negative germs and fungi. Distilled peanut oil is much less active. The author believes that oils, and especially the glycerides they contain, are, through a still unknown mechanism, submitted during their distillation to modifications which are responsible for the antibiotic potency of these distillates.

Value of Brewers' Yeast

For the past six years, H. W. Soper (*Med. Times* 77:321, 1949) has been using brewers' yeast powder in cases of malnutrition, especially those patients who suffer from lack of vitamin B. The yeast powder contains all the vitamin B complex in natural form. He has found that the administration of two teaspoonfuls daily, usually taken in orange juice or tomato juice, seems to facilitate the absorption of all other vitamins.

Many patients have come to him suffering from malnutrition despite the fact they had been taking synthetic vitamins for periods of one or two years. By prescribing the yeast powder and food vitamins, they have shown splendid improvement; many of them reaching a normal state of nutrition. This finely ground powder can be used very early in the treatment of gastric and duodenal ulcers because it is non-irritating and supplies the deficiency which is present in practically all early ulcer diets.

KOMMON SCENTS!

It was a hot summer in more ways than one. It proved conclusively that "blowing your top" isn't the same as air conditioning.

•

Paul Robeson returned from Europe with "Peace" talks that were more simulated than stimulating. After the news reporters quoted him, Robeson screamed so loud he became music's first baritone falsetto.

•

Smartest cookie in the celebrity-studded summer was Jackie Robinson, who confused Robeson by stealing both second base and Robeson's act. When Jackie got through testifying, he had written a new and improved lyric to "Ballad For Americans."

•

In addition, Robinson became the first American to enlist a Committee of Congress as witnesses when a feller asks his boss for a salary raise. Rumor has it that Jackie's bid for money made his dignified employer so nervous, Rickey almost dropped his tray in the automat.

•

Trying to duck the heat of summer with the breeze of Atlantic Pact arguments, Senator Taft ran into a windmill. Seems he tangled with fellow Republican John Foster Dulles, who not only knows as many statistics as Taft, but can prove 'em.

•

Then there was Major General Vaughan, who continued to look like a major mistake. Some nasty people implied that the general's friends were getting 5% for reasons other than military longevity.

•

Most precious line of an otherwise dull season came from a member of the Cosmetic Industry, who said of a competitor: "He's a real reactionary, who always wants to maintain the Status Quo like his father and unmarried grandfather."

George Fiedler

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Compensation for Salesmen

(*Continued from page 281*)

in it an opportunity to earn a good living and at the same time bring the company sales on a profitable basis. If territories have not been analyzed fairly recently, they should be carefully examined to determine whether the shifts in the physician population have rendered existing boundaries obsolete. Sometimes a few territorial revisions can do wonders toward cutting down expenses as a percent of sales and can also make an important contribution to the morale of the sales force.

Many sales managers place excessive emphasis on the number of calls made and too little on the productivity of those calls. The trend in some industries today is to urge salesmen to make fewer calls and to spend more time on each call. In other words, increase the intensity of contact rather than the frequency of contact which in turn cuts down travel time.

Of course you may also find that a salesman is not doing *enough* travelling to get the most profitable volume out of his territory. He may be calling on a few friendly doctors and dealers much more often than their business warrants and thus be neglecting more desirable contacts which might require more selling effort on his part. All this merely points to the necessity of constant review by management and to the necessity of not accepting things as they are simply because they have been handled in the same way for a long time. "Sacred cows" have no place in modern sales administration, and it is up to all of us to be sure that our compensation plans and expense policies have kept pace with the rapid changes in our industry and in the markets it serves.

In addition to adequate compensation and incentive plans, there are many non-financial incentives for salesmen, and it is important to note that they may be equally as important to the salesman as dollars and cents. These include pride in the company and its products, a sales department sympathetic to his problems, pension and insurance provisions and a firm belief in his opportunities for advancement. Such factors must not be under-emphasized by any of us when we are examining our salesmen's compensation problems. They may go a long way toward building up the morale so necessary for a really aggressive and effective sales organization.

Beta-Chloroproprionitrile Offered

Beta-Chloroproprionitrile, a chemical containing an active halogen and a nitrile group, is being offered by the New Product Development Department, American Cyanamid Company. It is slightly soluble in water, very soluble in most organic solvents, and boils at 174-176° C. at 752 mm. Hg. A bulletin which gives extensive data on this chemical is available from the company at 30 Rockefeller Plaza, New York 20.

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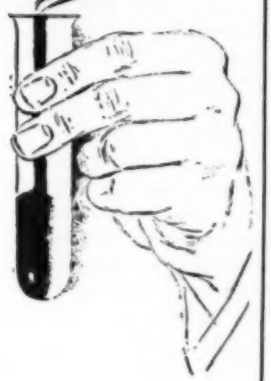

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Perfumer's Shelf

New Uses for Perfumes

In the British publication, *The Perfumery and Essential Oil Record* for March, 1949, F. Scott Hall discusses the American perfume market. In this discussion he calls attention to the so-called indirect perfume market. Here, attempts are under trial to introduce perfumes for the first time where they have never been used before. One example is perfumed laundry starch which some housewives might perfer for olfactory pleasure's sake; another, a fine synthetic kitchen "soap" which carries a fragrance without transferring it to dishes and pots. A New York laundry adds a lavender-scented blotter with advertising copy, for use as sachet, to every package of linen delivered. The terrific success of ball-point pens has been tried for duplication in the perfume field. The holders of the original patent are making ball-point applicators, filled with a jelly-like perfume composition that can be penned on to the skin without ever leaking from a bottle cap, or, an open point. A low-priced alcohol lamp has a perfume-soaked wick. There is a cedar-scented anti-moth wallpaper for use in clothes cabinets, and a lot of room deodorants and insect sprays, including a covering perfume composition. In each case consumer reaction has to be tried out, with surprising results in some cases. Once a manufacturer of hospital rubber sheeting added covering flower odor, but patients objected to the "bouquet."

Hall feels that there are a large number of outlets which still await trial. For example, in America's humid summer heat, which lasts about three months a year, and also in the well-heated homes and offices at winter-time, a use of a plant odor may be just as refreshing as a carbonated, flavored drink, a group of green plants on the window, and a breath of air from the country outside. Electric fans, fresh laundry and perfect plumbing are doing the utilitarian part of the job, to which perfumes of the right type would add a pleasant note.

Air Disinfection with Perfume Materials

In a report on the disinfection of the air by means of aldehydes and essences, L. Checcacci (*Ann. igiene* through *Chem. Abstr.* 43:5083, 1949) stated that the best of the materials tested was thyme essence, the next best, pine essence. The former reduced the numbers of *E. coli* by 78 per cent, sarcina by 61 per cent, and *Straphylococcus aureus* by 32 per cent after 120 minutes exposure. Reduction was expressed in per cent of the untreated controls. The corresponding figures for pine essence were 71, 53 and 31 per cent. Acetaldehyde was the most effective of the aldehydes, giving reductions of 5, 39, and 36 per cent. Cinnamic aldehyde, benzoic aldehyde, and salicylic aldehyde were less effective. Essences of bergomot, lavender, lemon, and eucalyptus had low disinfectant powers. Ethyl alcohol had practically none when used as an aerosol. Soaps added to the aerosols lowered their bactericidal power. Determinations were made at the end of 15, 30, 60 and 120 minutes. The temperature varied from 12 to 15°C. and the relative humidity from 76 to 87 per cent. All the aldehydes were tested in concentrations of 1 per cent in alcohol. Essences were tested in concentrations of 30 per cent. The aerosols were applied at a concentration of 0.5 cc. per cubic meter of air.

New Pulegone Mint

In a discussion of the aromatic flora of Maroc, J. Gattefosse, L. Benezet and G. Jgolen (*Ind. parfum.* 4:11, 1949) describe a new pulegone mint, *Mentha gattefosse*. It is easily distinguished from *Mentha pulegium* and is close to *Mentha cervina*. The essential oil from the new mint has the following properties:

Specific gravity	**0.9403**
Index of refraction	**1.4920**
Specific rotation	**15.25°**
Acid index	**2.8**
Ester index	**7.71**

The oil is soluble in 1.7 volumes of 70 per cent alcohol and has a purlegone content of 87 per cent. Distillation gave a center fraction of pulegone, with the following characteristics:

Specific gravity	**0.939**
Index of refraction	**1.4860**
Specific rotation	**22.4°**

In the tailings an aliphatic hydrocarbon, probably tricosane, was obtained.

Barbary Thuya Leaf Oil

The Barbary thuya is a well-known conifer widely diffused in certain parts of North Africa, and to a small extent in Spain. Its leaves and branchlets yield about 1 per cent. of an aromatic oil. In *Industrie de la Parfumerie*, (February, 1949) J. Gattefosse and G. Igolen give an interesting account of its distribution, botanical features and leaf oil characteristics. By distillation of the leaves and young shoots they obtained in 1 per cent yield a yellow colored oil with the following constants:

Specific gravity	**0.9414**
Specific rotation	**+39°25**
Index of refraction	**1.4720**
Acid number	**2.8**
Ester value	**106.6**
Ester value (after acetylation)	**154.0**
Carbonyl index (cold)	**11.2**
Carbonyl index (hot, 1 hour)	**58.8**
Phenols	**none**

The oil is soluble in 1.4 volumes of alcohol at 80°C.

Miscroscopy of Catnip Oil

In another of the reports on the chemical microscopy of essential oils, L. W. Greene (*Am. J. Pharm.* 121:91, 1949) provides data on catnip oil. He points out that the leaves and flowering tops of the catnip herb (*Nepeta cataria*, Linne, Fam. *Labiatae*) yield approximately 0.3 per cent of a volatile oil on distillation with steam. The herb is also known as catnep, catmint, and a cat's wort. This perennial plant is indigenous to Asia and Europe and has been naturalized in the United States. The microscopic test for identifying this material depends on the reaction between catnip oil with phenylhydrazine. In the procedure described by Greene, a drop of the oil (about 2 mm. in diameter) was placed on a glass microscope slide, and a drop of phenylhydrazine (Eastman Kodak Co. product, m. p. 19-19.5°C.) of about equal size was intimately mixed with it.

Small glass rods were employed in handling and mixing the sample and reagent. The preparation was covered with a glass slip and examined under the microscope in ordinary and in polarized light. In less than five minutes, the preparation became hazy and birefringent crystals, were observed at a magnification of 100 diameters. In 15 minutes the preparation was filled with crystals. These were birefringent but showed no interference colors. The next morning the crystals had a more branching structure but no further change was observed after the preparation had stood at room temperature for two days.

The reaction described by Greene appears to furnish a means of establishing the identity of catnip oil. At least it serves to differentiate this product from quite a long list of essential oils and aromatic chemicals tested by this method.

Scotch Mint and Spearmint

For over a century, the United States Pharmacopoeia has recognized as Spearmint only the one species, *Mentha spicata* L. (*M. viridis* L.). Within recent years, however, the commercial crude drug and its volatile oil on the one hand and the current Pharmacopoeial description on the other have not always corresponded in all respects to the species named. A "variety" known as "Scotch Spearmint" has become popular with the American growers. As this is apparently a true species, quite distinct from *M. spicata*, it would seem manifest that recognition of and data for this entity should appear in the official monographs. It was on such a basis that G. M. Hocking (*J. A. Ph. A., Scient. Ed.* 38:394, 1949) undertook a comparative study of the cultural, morphological, and histological charactertistics of various species of *Mentha*. In these investigations, a study has been made of wild-growing and cultivated spearmints of the United States, past and present, in the field as well as from herbarium specimens and textual descriptions, and it has been shown that, in addition to true spearmint, an increasingly large proportion of the commercial herb and oil derives from "Scotch spearmint." Wrongly called a "form" of spearmint, "Scotch mint" is a distinct entity which belongs neither to the species *Mentha spicata* L. nor even to the respective subgenus *Spicatae* L., but to a different species and subgenus of *Mentha*, viz., *M. cardiaca* Gerard ex Baker of subgenus *Verticillatae* L.

Hocking also presents a fairly complete description of *M. cardiaca*, and several means of distinguishing it from *M. spicata* (True Spearmint) and other *Mentha* species. He also notes that the reported variation of spearmint oil in constitution and assay may be explained perhaps by differences between Scotch mint oil and that of true spearmint, on which latter the earliest standards were based. Studies on the respective oils of the two species are to be undertaken. On the basis of a study of many authenticated specimens of both "spearmints," suggestions are advanced by Hocking for bringing the official monographs up to date.

Odors of Vanilla Beans

In the recently published *Travaux des Laboratoires de Metiere Medicale de La Faculte de Pharmacie de Paris* (through *Perf. & Essent. Oil Rec.* 40:235, 1949), A. Goris has published some very interesting findings on the odor of the vanilla bean. As is well known, the beans are fermented to develop the odor and flavor, which are both immeasurably superior to that of vanillin and synthetic vanilla flavors. This paper adds to the knowledge of the "trace" bodies which are responsible for these differences. Goris states that the odor of the vanilla bean is due to the decomposition of glycosides present in the fruit. The one found in the largest amount is vanilloside; the others are only known by their decomposition products. The alcohol, glucovanillic alcohol known as "vanilloloside," is only present in small amounts, and has only been characterized by the identification of vanillic alcohol amongst the decomposition products. The third glucoside present which this worker was unable to isolate in a pure state but on enzymic decomposition, yields an ester of fine odor value which plays a big part in the odor of the vanilla bean. This decomposition product can be distinguished from vanillin by color tests with ferric chloride and sulphuric acid. A fourth glucoside present has been found to be the glucoside of 1:3:4-protocatechnic aldehyde. Lecomte's hypothesis of the formation of these bodies from coniferoside is abandoned, since the author could find no trace of this glucoside or of coniferyl alcohol in the "complete" essence of vanilla.

Directions are given in the paper for preparing a "complete" essence of vanilla with an infinitely better odor than vanillin by autoclaving the pods at the source of growth to prevent fermentation, then cutting and drying and treating with boiling alcohol to extract the glycosides. The alcohol is then distilled off and the aqueous extract fermented. In this essence the following bodies were detected: (i) Vanillin in large quantities; (ii) an ester of unknown constitution which gives the vanilla bean its fine odor; (iii) a small quantity of protocatechnic 1:3:4-aldehyde and acid and vanillic acid; (iv) no vanillic alcohol could be found.

Gum Turpentines of Pines

In one of a series of articles written jointly by the California Institute of Technology and the California Forest and Range Experiment Station, N. T. Mirov, T. H. Wang and A. J. Haagen-Smit (*J. A. Ph. A.*, Scient, Ed. 38:403, 1949) present a study of the chemical composition of turpentines from five species of pines. The turpentines used in these investigations were obtained under reduced pressure from oleoresin samples of the following species: *Pinus strobus*, *P. cembra*, *P. taeda*, *P. radiata*, and *P. virginiana*.

The oleoresin of *Pinus strobus* consisted of 75 per cent rosin and 25 per cent volatile oil (turpentine). The major constituents of the volatile oil are from *dl*-α-pinene (75 per cent) and *l*-β-pinene (15 per cent). Small amounts of terpene alcohols and ketones (4 per cent) and tricyclic sesquiterpene (0.3 per cent) were found. The oleoresin of *Pinus cembra* consisted of 78.6 per cent rosin and 21.4 per cent turpentine. The turpentine contained 85 per cent *d*-α-pinene and 9 per cent *l*-β-pinene. *Pinus taeda* oleoresin consisted of 85 per cent *d*-α-pinene and 12 per cent *l*-β-pinene. Limonene was not found. The oleoresin of *Pinus radiata* consisted of 83 per cent rosin and 17 per cent turpentine. The turpentine contained approximately 75 per cent *dl*-α-pinene and 22 per cent *l*-β-pinene. *Pinus virginiana* oleoresin consisted of 77 per cent of rosin and 23 per cent of turpentine. The turpentine consists almost entirely of α-pinene (90 per cent of *dl*-α-pinene and 8 per cent of *dl*-α-pinene).

Thus composition of turpentines of the five pine species studied is very simple, consisting in four cases chiefly, if not completely, of α-and β-pinenes and in one case of α-pinene alone.

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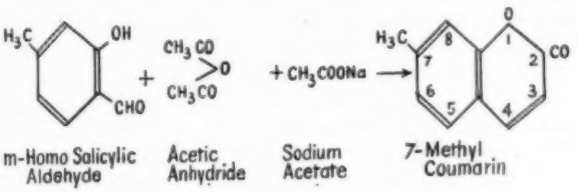
Methyl Coumarins

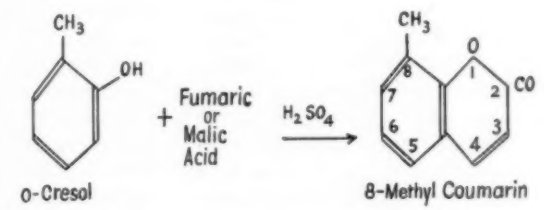
(*Continued from page 278*)

Tiemann reaction, and was referred to as Aldehyde I (see above).

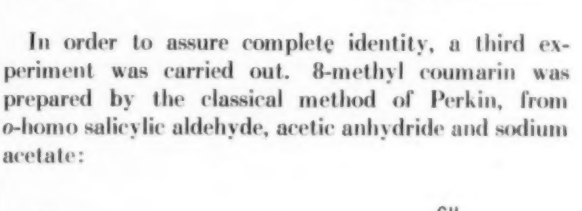


The samples of 7-methyl coumarin prepared by the two differeent methods proved to be the same substance. A mixed melting point determination showed no depression of the melting point.

8-*methyl coumarin* was prepared by a procedure similar to that used for the preparation of the 6- and 7-methyl coumarins; i.e., *o*-Cresol was condensed with fumaric acid in the presence of sulfuric acid. In another experiment, *o*-Cresol was condensed with malic acid in the presence of sulfuric acid.



In order to assure complete identity, a third experiment was carried out. 8-methyl coumarin was prepared by the classical method of Perkin, from *o*-homo salicylic aldehyde, acetic anhydride and sodium acetate:



o-Homo salicylic aldehyde was prepared by Reimer-Tiemann reaction from *o*-cresol, chloroform and sodium hydroxide. The resulting *o*-homo salicylic aldehyde was separated by preparing the semi-carbazone (m.p. 241-242°) and regenerating the aldehyde by acidification with dilute sulfuric acid, followed by steam distillation. The yield of *o*-homo salicylic aldehyde was very small.

Since it was necessary to prepare more aldehyde, the method of J. C. Duff[14] was used. *o*-Cresol was condensed with glycero boric acid and hexamethylene

tetramine to yield *o*-homo salicylic aldehyde. In this reaction the yield of aldehyde was also very poor.

Mixed melting point determinations of samples of 8-methyl coumarin prepared by these different methods showed no depression of melting point. The yield in all three methods was small. On the other hand, the 8-methyl coumarins obtained, after one crystallization from water, proved to be relatively pure.

TABLE FOR COMPARISON OF METHYL COUMARINS

All six mono substituted methyl coumarins consist of white crystals.

Position of Methyl group	m.p. *experimental*	m.p. *literature*	*odor*
3–	89-90° needles from dilute alcohol.	90°; [1, 7] 91° [6]	coumarin-like
4–	81-82° needles from petroleum-benzene also from water	81-82°; [4] 82°; [15] 79° [1]	walnut-like.
5–	55-56° needles from dilute alcohol and from water	56.7-57° [16] from benzene. 65-65.8° [16] from alcohol.	between 3 and 4.
6–	74-75° leaflets from dilute alcohol	74.6-75° [5, 17]	pleasant coconut odor.
7–	127-128° leaflets from dilute alcohol and from water.	125.8-126.4° [5] 128° [15, 1]	very faint coconut-like.
8–	109-110° needles from water.	109-110° [5]	almost odorless.

Angeli and Poverini[1] report that when aliphatic radicals are substituted for the hydrogen atom in the 5, 6, 7 and 8 position of the coumarin molecule, no notable change in odor occurs. On the other hand, when substitution in the 3 and 4 position is effected, profound changes in odor result. According to these authors 3-methyl coumarin possesses a strong characteristic odor, whereas 4-methyl coumarin is odorless or nearly so. Guillot,[2] in the course of a discussion on molecular structure and odor, repeats this statement. Results of the present investigation do not confirm the findings of Angeli and Poverini.

A comparison of the odors of all six methyl coumarins showed that 3-methyl coumarin had a mild coumarin like odor. 4-methyl coumarin had a strong odor reminiscent of walnut. 5-methyl coumarin had an odor somewhat reminiscent of that of 3- and 4-methyl coumarin. 6-methyl coumarin had a very pleasant odor reminiscent of coconut. 7-methyl coumarin had a very faint coconut like odor. 8-methyl coumarin was almost odorless. Tests of these methyl coumarins exhibited the same interesting character in flavor especially 3-, 4-, and 6-methyl coumarin.

At the present time only the 3- and the 6-methyl coumarin are commercially available.

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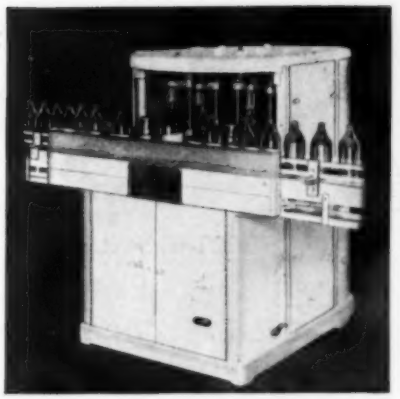

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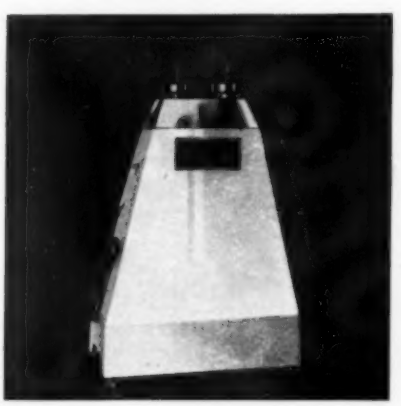

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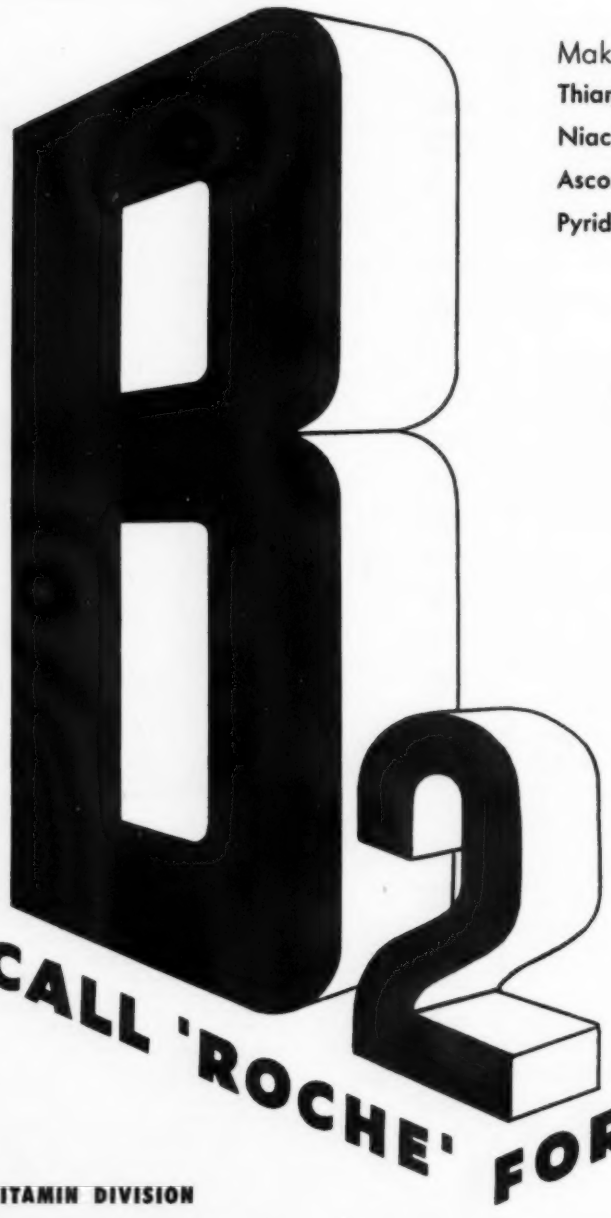

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Abreast of the Markets

Citric Acid In Extremely Tight Supply. Substantial Reduction In Caffeine Result of New Production.

During the time of heaviest consumption last month, citric acid was in extremely tight supply. This was due to several factors the main one of which was the havoc wrought to the California lemon crop last January. The California frosts of the early part of this year resulted in destruction of two-thirds of the lemon crop and in addition reduced the yield of juice from the remaining one-third of the crop to half of normal. This means that the total of available lemon juice from the anticipated crop was reduced to one-sixth of what would have been available if the cold weather had not occurred.

While this reduction in supplies of citric acid was bad enough, two other factors only aided to aggravate the situation. One of these was the shipping strike in Hawaii which prevented shipments of Hawaiian citric acid to this country. On top of this, the British shipping strike prevented shipments of British citric acid to Canada, causing our Northern neighbors to look to this country for supplies. Despite increased production facilities acquired since the close of the war, the fermentation manufacturer was hard pressed to keep up with demand and was said to be without normal stocks.

Caffeine Prices Trimmed

The successful completion and subsequent economies of full-scale operation of a new manufacturing unit in St. Louis has resulted in a substantial reduction in the price of Monsanto Chemical Company's caffeine, it was announed.

The reduction amounts to $1 a pound for anhydrous caffeine and a proportionate reduction of 95c a pound for hydrous caffeine. Monsanto's new price schedule is $4 a pound for anhydrous and $3.80 a pound for the hydrous product.

The reductions were brought about chiefly through the following three factors: 1—The investment of several million dollars in research development and manufacturing facilities 2—The successful operation of a new manufacturing process for caffeine, which frees the product from dependence on the irregularities of foreign sources of raw materials 3—A demonstration of production economies, which enable the company to pass on the savings to the consumer.

The new operation is the world's first large-scale plant for the manufacture of synthetic caffeine by a modified and improved process and marks a new and important application of organic chemistry.

Since the new facilities have been brought into operation, it is stated, ample supplies of caffeine have been manufactured for all needs. The new process produces a high-quality product affording greater purity than current USP standards and fully equivalent or better than anything produced by other methods, according to statements released by Monsanto.

Cod Liver Oil Prices Down

Prices for codliver oil for shipment from Norway have been reduced $8 to $10 a drum and as a result local houses have revised selling schedules to $2.10 a gallon in 30 gallon drums for September, October delivery.

The demand for codliver oil is normally quiet at this season of the year, but sales over the first half of this year proved disappointing and the reduction in export prices in Norway is believed to be a move to stimulate export sales.

The following report from "Foreign Commerce Weekly" is interesting at this time.

Output of codliver oil in the first half of 1948 in Norway was estimated at 1,710,000 gallons, and for the entire year 1948, at approximately 2,550,000 gallons.

Exports of steamed medicinal codliver oil in 1948 totaled 1,880,213 gallons, valued at $4,188,069. Exports of this type of codliver oil to the six largest markets in the years 1946, 1947, and 1948 are shown in the accompanying table:

Norwegian Exports of Steamed Medicinal Cod-Liver Oil to Principal Markets

Country of destination	1946 *Gallons*	1947 *Gallons*	1948 *Gallons*
United States	350,956	353,545	368,181
Netherlands	214,061	175,307	285,705
Italy	178,846	229,991	110,240
Poland	122,551	267,319	252,525
France	101,073	163,736	99,700
Turkey	40,974	———	97,164

Source: Bureau of Fisheries, Norway.

Norwegian Exports of Medicinal Cod-Liver Oil

Type of oil	1946 *Gallons*	1947 *Gallons*	1948 *Gallons*
Steamed medicinal codliver oil	2,796,187	2,592,481	1,880,213
Raw medicinal cod-liver oil	48,635	2,271	19,232
Pale cod-liver oil	1,514,462	2,375,408	3,584,432

Source: Bureau of Fisheries, Norway.

In 1948, halibut liver oil exports from Norway amounted to 125,088 pounds. No comparable figures are available for 1947 and 1946.

The export price of medicinal cod liver oil in April 1949 was $67.50 per 30 gallon drum, cif east coast of the United States. Last year's price of $73.50 was increased on July 12, 1948, to $77, but on January 20, 1949, was reduced to the April level. The Government export tax on this price is said to be about $10 per drum.

In April, 1949, the Government-fixed price to the producer of codliver oil was 210 crowns or $42.47 per barrel of 107 kilograms, fob Lofoten district and 205 crowns or $41.46 for the Finnmark district.

Exceedingly bad weather had a serious effect on cod fishing at the beginning of the 1949 season. It is reported that the catch for the first 3 months of the season was about 12,000 tons less than during the corresponding period of 1948, and, according to the Directorate of Fisheries, the outlook for the remainder of the cod fishing season is not promising.

It is anticipated that there will be fewer cod along the coast of Norway, and efforts are being made to extend the fishing farther afield, principally in the vicinity of Greenland. It has been decided to purchase and equip additional trawlers and larger fishing boats. Many opposed the increased use of trawlers as being uneconomic and a danger to the schools of cod by the indiscriminate catching of all types and sizes, thereby possibly depleting the supply. Experiments which have been

(*Continued on page 344*)

• Prices quoted in this section were current on the first of this month,

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Downward Trend of Crude Glycerin Production Firms Market. Supply Position of Lanolin Fails To Improve.

A firm tone continues to prevail in crude glycerin in the face of a good demand for refined material. By the latter part of August part of the 1,000 tons of Russian crude should be afloat. The purchases made through London consisted of two lots of 500 tons each and were for August-October shipment. The arrival of this material is expected to reduce the pressure of demand for crude from non-refiners.

Monthly production of crude glycerin during the past two or three years has varied considerably, with a recent peak production in the winter of 1947-48. Since then production has been at a lower level. This is not surprising as 85 percent of the commodity comes as a by-product of the soap industry and sales of soap have not been increasing. The downward trend of crude glycerin production since 1947 and the continuing competition from synthetic detergents indicate that production of crude glycerin probably will not increase appreciately in the near future. The recent decline in crude glycerin production has been offset by the gradual rise in the production of synthetic glycerin. It is believed that synthetic glycerin production is now approaching plant capacity.

Glycerin has a great variety of important uses, ranging from explosives, plastics and tobacco products to lotions and tooth paste. With such numerous uses, large changes in consumption are not expected with changing industrial activity. With moderately stable consumption and no pronounced change in production of the total refined grades expected for the next few months, total stocks of crude and refined glycerin will probably remain near the present level. This situation has prevailed from February to May inclusive and prices have also been stationary during April, May, and June.

Exports for the first quarter of 1949 were 2 million pounds of crude and refined glycerin as compared with 1.2 million pounds for 1948. This large increase was due to exports to Germany, mostly in the form of crude. Shipments to Germany have been greater than all of the United States exports to the rest of the world. Total shipments to Germany in 1949 may approximate 10 million pounds. One factor in bringing this about is the February-March decline in crude prices which placed the United States producers in a good competitive position in relation to suppliers in other countries.

Lanolin Remains Scarce

The supply position in lanolin remains tight with major suppliers being reluctant to accept new business because of the ready outlet for virtually all available supplies. Both the pharmaceutical and cosmetic grades are difficult to obtain for immediate delivery. Less material has been arriving from abroad of late, and the outlook regarding domestic production continues highly clouded being dependent upon scouring operations in the wool industry.

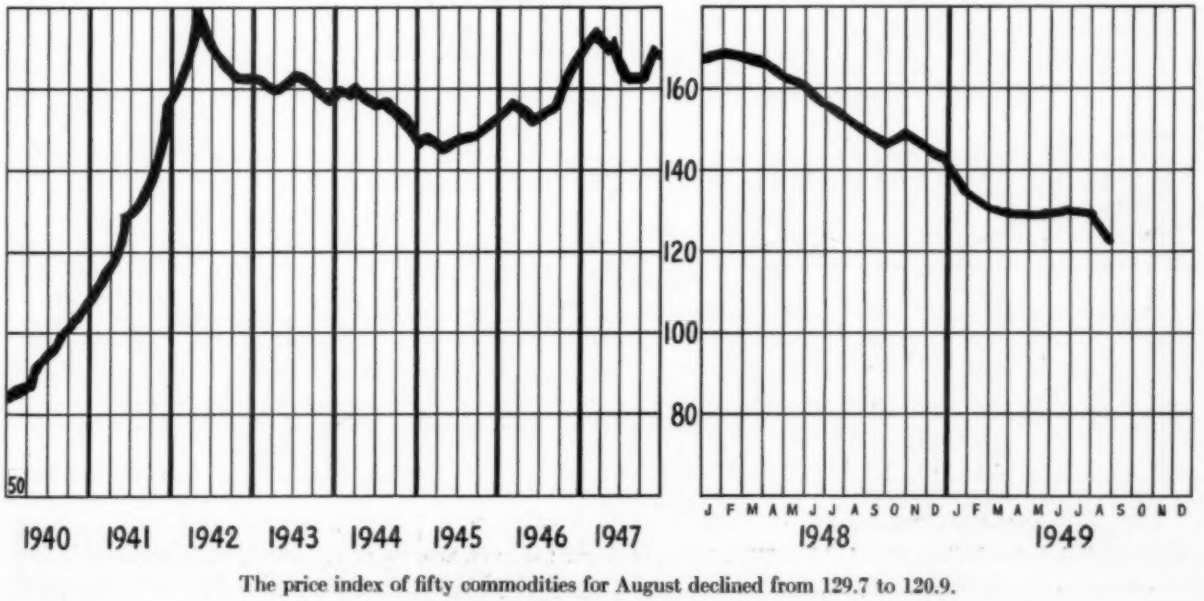
In some quarters it is said that a number of mills have reasonably good stocks of scoured material on hand and only a marked and prolonged period of activity in the wool industry could be expected to bring about any change in the lanolin picture. Meanwhile the arrival of the Fall season will undoubtedly bring a more pressing demand for lanolin especially for the account of pharmaceutical manufacturers.

Quicksilver Down

A few odd lots of quicksilver that had been pressing for sale finally found buyers at a lower price of $75 per flask thus making it the second time since the war that the metal had fallen below $1 per pound. In May a year ago the metal old at $73 a flask. The slow inquiry from makers of thermometers and instruments for gauges and other recording devices is not causing any concern among sellers since the outlet in this direction only accounts for less than 5 percent of the total consumed in the United States.

Largest consumption of quicksilver is in the electrical field, and mercury

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for August declined from 129.7 to 120.9.

AUGUST PRICE CHANGES

UP

Anise Oil 4c
Citronella Java 30c
Clove Oil 30c
Geranium Oil Bourbon $1.50
Henbane Leaves 5c
Kamala 8c
Menthol Nat. 50c
Patchouli Oil 40c
Stramonium Leaves 1c
Tansy Oil 50c
Valerian Root 3c
Wormseed Oil 25c
Zinc Oxide 1c

DOWN

Agar Agar #1 20c
Angostura Bark 4c
Asafetida 3c
Barberry Bark 12c
Belladonna Leaves 10c
Buckthorn Bark 6c
Caffein 15c
Cascara Segrada 6c
Chamomile Flowers Roman 5c
Cinchophen 70c
Cocoa Butter 2½c
Cod Liver Oil $8 bbl.
Coltsfoot Leaves 3c
Coriander Oil 50c
Culvers Root 5c
Damiana Leaves 5c
Elder Flowers 5c
Elm Bark 4c
Fennel Oil 25c
Hellebore Root Black 3c
White 5c
Irish Moss 2c
Lavender Oil 25c
Lavender Spike Oil 10c
Lemon Oil, Calif. 15c
Italian 20c
Lycopedium 35c
Mercury Metal $4
Nutmeg Oil 65c
Orange Oil Cold Pressed 8c
Orris Root Flor. 8c
Voerna 2c
Petit Grain Oil SA 10c
Plantago Seed 2c
Podophyllin $1.55
Quince Seed 5c
Rue Herb 3c
Sarsaparilla Root Mex. 6c
Senega Root 15c
White Pine Bark Rossed 3c
Wild Cherry Bark 7c

salts manufacturers take close to 50 percent of the imports and the amount produced at home.

There remains approximately 27,000 flasks of quicksilver to be imported from Italy for stockpiling purposes, and with over 50,000 flasks having already been received, this year's imports will break all previous records.

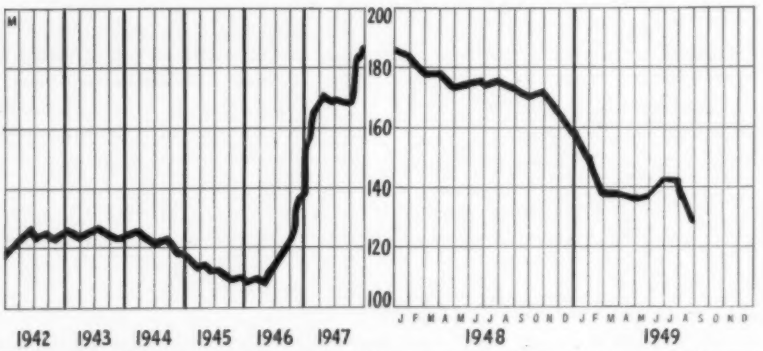
Cod Liver Oil

(Continued from page 341)

conducted in the Lofotens with a new type of drag net, however, show promising results. Since 1947, the Government has marked fish, and reports made in 1947 and 1948 are being received, chiefly from the Lofoten district. It is hoped to follow the movements of the fish and so increase future fishing possibilities.

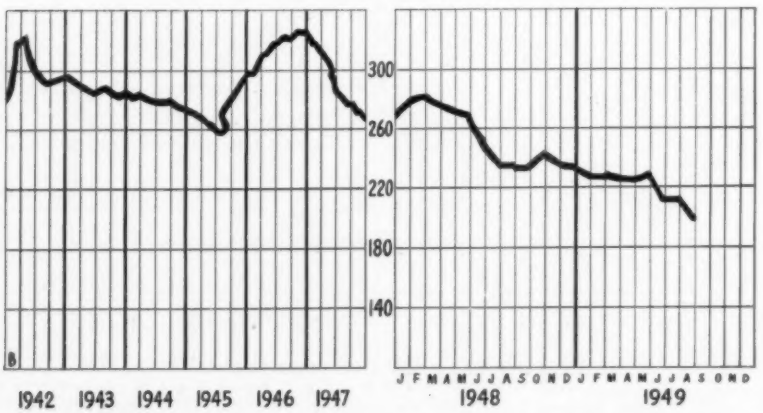
A number of expeditions were sent out by the Research Department of the Bureau of Fisheries to investigate fishing in the North Atlantic area. Plans included dispatching a research vessel to the ocean between the Norwegian mainland and Spitsbergen and off western Greenland.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index declined from 142.9 to 129.5. Cod liver oil dropped $10 a drum, mercury was down sharply, menthol advanced 50c per pound.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index declined from 217.3 to 203.4. Agar, belladonna, cascara, and orris were lower.

Menthol Up

The spot price of menthol advanced during the current trading period despite the lack of actual consumer demand here and the heavy inventories on hand. The recent fluctuations in price have been up and down in an irregular market largely confined to the trading of small lots between dealers. High spot prices currently prevailing are a reflection of replacement costs from primary markets, and not the price level at which substantial business volume in the American market could currently be done. Quotations currently ranged from $11 to $11.10 per pound.

Agar Easy

Prices on No. 1 Kobe material ranged as to supplier and quantity from $2.40 to $2.60 per pound in quantities of ten or less bales. These prices apply to duty paid material. There were various lower prices rumored in the market, with quotations on agar varying all the way down to $1.42 per pound. However, it was found that quotations of less than $2.40 duty paid was generally applicable to material which was not guaranteed to be Kobe No. 1, or which was old stock.

One producer stated that since prices in Japan are controlled with No. 1 Kobe at $1.70 and with a 25 percent duty on the item, low quotations on agar of No. 1 Kobe material were not feasible, in view of shipping and handling costs.

Peppermint Unchanged

Pending the naming of new crop prices, the market for oil of peppermint remained virtually at a standstill.

Total production of mint oil in 1949 is expected to be well below the record volume produced in 1948, the bureau of agricultural economics of the Department of Agriculture reported on August 10th.

It is estimated that 1949 production from all mint will total 1,784,000 pounds of oil, 21 percent below the record crop of 2,261,000 pounds produced in 1948. However, the production forecast for

this year is 27 percent above the 1938-47 average output of 1,410,000 pounds.

Although the acreage of mint available for harvest this year is about equal to the large acreage harvested in 1948, yield prospects are poorer than they were a year ago. According to the bureau, unfavorable crop prospects in Michigan and Indiana, where late spring frosts had an adverse effect on stands and yield, accounts for the bulk of reduction from last year's production level. Although crop prospects in Washington and Oregon are not as favorable as they were a year ago, estimated production for 1949 in these states is only 3 percent less than 1948.

The acreage of spearmint available for harvest this year is estimated at 44,700 acres, 3,000 more than the acreage harvested in 1948, and 6,000 greater than the 1938-47 average acreage. Production is estimated at 1,386,000 pounds of oil, only 11 percent less than the 1,551,000 pounds produced in 1948, and 19 percent greater than the 1938-47 average of 1,160,000 pounds. The increased acreage has partially offset the reduced yield prospects which are anticipated in all producing states.

Spearmint acreage has declined from 19,700 acres harvested in 1948 to 16,400 acres available for harvest this year, but 1949 acreage is still well above the 1938-47 average of 7,660 harvested acres. Yield prospects are particularly poor on spearmint this year both in Michigan and Indiana, with late spring frosts the important factor. Total 1949 production of spearmint is estimated at 398,000 pounds of oil, 44 percent less than the 710,000 pounds produced in 1948 but 59 percent above the 1938-47 average of 250,000 pounds.

Bergamot Firm

Though not especially active, the market for bergamot oil remained very firm, at least as far as prices were concerned. The well-maintained spot position traced mainly to the much firmer situation that seemed to have developed in the primary market. Some dealers though demand would gain in the Fall months. Spot prices ranged from $4.00 to $4.50 per pound.

Lemon Oil Declines

Competition between some of the smaller suppliers of California lemon oil brought that article on spot down to an inside of $2.65 per pound. In quarters with the largest production the market was $3. Italian oil was lower at from $2.40 to $5 per pound, the change being on the minimum side of the range. The fact is that Italian oil has many qualities on spot and never has the reputation of the shipper been of so great importance. Demand was reported showing some shrinkage along seasonal lines but it was still fair in several quarters, according to reports.

Rose Oil Bulgaria

The picking of roses in Bulgaria was begun on May 23 in the Karlovo district in the villages of Otets Paisievo, Srnegor, and Suhozem. The first rose oil factory to start processing was that in the village of Banya. Other factories in Karlovo, Kalofer, Bozhidar, and Strelcha will be put into operation this year.

The 1949 rose crop is reported to be an average one, the quantity and quality of the rose oil having been improved by frequent rainfalls.

Small Mexican Vanilla Crop Predicted

Less natural vanilla will be available for flavoring next year in the face of latest estimates of the vanilla bean crop in Mexico. The drought in Mexico has hit the vines and the coming 1949-1950 crop will be less than 50 tons according to private estimates received from the primary center. Normally the Mexican crop is around 150 tons.

Meanwhile advices from Madagascar place the coming vanilla crop at 200 tons including the Comoros, Reunions and Madagascars. European consumption of vanilla beans is expected to reach a prewar level of about 200 tons next year and consumption in the United States is running at about 250 tons a year.

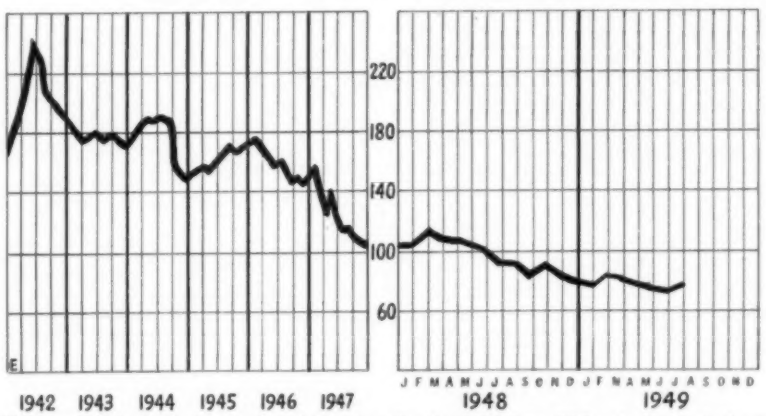
Virtually no offerings are coming through from Marseilles despite the fact that receipts there have amounted to about 120 tons over the past eight weeks. It is believed that most of these beans have been sold for shipment to Europe.

Locally vanilla bean prices remain unchanged but demand is steady with the market displaying an undercurrent of strength.

Chamomile Flowers Down

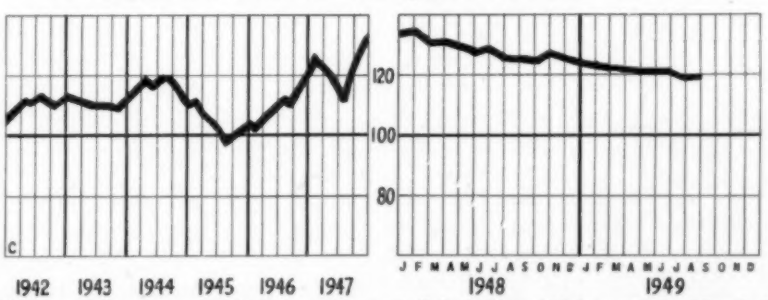
Roman chamomile flowers were lower at 95c to $1 per pound but no change in quotations on Hungarian flowers were made, though some expect lower prices later.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index declined fractionally from 82.7 to 82.0. Anise and clove were higher. Lavender and lemon oil declined.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index advanced slightly from 119.3 to 120.5. Menthol advanced, quince seed declined.

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(*Continued from page 271*)

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Tubocurarine Chloride Injection
Tyrothricin
Tyrothricin Solution
Tyrothricin Spray
Tyrothricin Troches
Vanilla
Vanilla Tincture
Vasopressin Injection (Pitressin Injection)
Vasopressin Tannate Injection
Zinc Gelatin
Zinc Oxide Paste

Articles Official In The U.S.P. XIII But Not Admitted To The U.S.P. XIV

Alum
Alum, Exsiccated
Anise Water
Arsenic Trioxide
Arsphenamine
Belladonna Ointment
Benzyl Benzoate, Saponated
Betanaphthol
Boroglycerin Glycerite
Butyl Aminobenzoate
Caffeine, Citrated
Calcium Iodobehenate
Camphor and Soap Liniment
Cedar Leaf Oil
Chalk Mixture
Chalk, Prepared
Charcoal, Activated
Chloroform Liniment
Cholera Vaccine

Chromium Trioxide
Cinnamon Spirit
Clove
Cod Liver Oil Emulsion
Cresol Solution, Saponated
Cupric Citrate
Cupric Citrate Ointment
Effervescent Powders, Compound
Ethyl Aminobenzoate Ointment
Eucalyptus Oil
Fennel Water
Formaldehyde Solution
Gas Gangrene Antitioxin, Bivalent
Gas Gangrene Antitoxin, Pentavalent
Gas Gangrene Antitoxin, Trivalent
Ginger
Ginger Fluidextract
Hyoscyamus
Hyoscyamus Tincture
Lard
Lard, Benzoinated
Lavender Spirit
Lavender Tincture, Compound
Lead Acetate
Mercurial Ointment, Mild
Mercurial Ointment, Strong
Mercurous Chloride, Mild
Mercury
Mercury Oleate
Methylene Blue
Methylrosaniline Chloride
Mustard, Black
Mustard Plaster
Myristica
Myrrh
Myrrh Tincture
Neoarsphenamine
Orange Flower Syrup
Orange Peel, Bitter, Tincture
Penicillin Dental Cones
Penicillin Injection in Oil and Wax
Penicillin Sodium (Replaced by Penicillin G Sodium)
Petrolatum, Liquid, Light
Phenacaine Hydrochloride
Phenol Ointment
Plague Vaccine
Potassium Acetate
Potassium Arsenite Solution
Potassium Carbonate
Potassium Citrate
Potassium Citrate, Effervescent
Potassium Sodium Tartrate
Quinine Bisulfate
Red Saunders
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Rhubarb, Aromatic, Syrup
Rhubarb, Aromatic, Tincture
Scarlet Fever Streptococcus Antitoxin

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Senna Syrup
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Silver Nitrate, Toughened
Silver Protein, Mild
Soap, Hard
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Sodium Hydroxide
Sodium Hypochlorite Solution
Sodium Perborate
Sodium Sulfite, Exsiccated
Sodium Thiosulfate
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Spearmint Spirit
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Tannic Acid
Tannic Acid Glycerite
Tannic Acid Ointment
Tar, Juniper
Tar, Pine
Tar, Pine, Ointment
Tetanus and Gas Gangrene Antitoxin
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I would suggest that you try the following:

White beeswax	**20.0**	**per cent**
White mineral oil (65-76)	**50.0**	**" "**
Distilled water	**28.8**	**" "**
Borax	**0.7**	**" "**
Perfume	**0.5**	**" "**

Dissolve the borax in the hot water. Melt the beeswax and run in the mineral oil, keeping the temperature at about 70°C. Pour in the borax solution at the same temperature with constant stirring. Mix without heat for about 1¼ hours. When cool (about 45-50°C.) add the perfume.

The Common Cold

(*Continued from page 276*)

This last point has been stressed by others who have pointed to the great need for further information. Until such knowledge becomes available, it is considered[24] unwise to recommend the installation of glycol vaporizers except under carefully controlled experimental conditions. Premature exploitation may incur the real danger that the method may be discredited and that the rational development of this important phase of air sanitation may be discouraged.

With much data already assembled, studies have gone forward on the advantages of oiling floors, bedding and the like in order to prevent the spread of dust-borne bacteria through the air. An efficient procedure for reducing the number of organisms in the atmosphere, it has been found[25,26] that better results are obtained when oiling is combined with air sterilization measures, particularly the use of triethylene glycol vapor. Here, too, further research seems indicated.

The tendency to overemphasize the effectiveness and value of air sterilization measures has come in for sharp criticism. As stressed in the *American Journal of Public Health*[24] those who discuss such procedures sometimes overlook the fact that upper respiratory infections are transmitted in many ways other than through the general atmosphere of occupied spaces. Infection from hands and handkerchiefs and sneezing cannot possibly be controlled by general aerial disinfection of occupied indoor spaces. It is emphasized that no matter how completely the air may be disinfected, people will still catch colds.

With this thought in mind it would seem advisable to consider the other methods for preventing colds. Unfortunately, as remarked by Keefer,[4] it seems that at present there are no effective methods for preventing common colds. Measures useful for reducing the number of colds in an individual include personal hygienic measures and avoidance of chills and sudden temperature changes. Also important is the careful avoidance of cold-infected persons and materials.

Occasionally in the past it was thought that certain substances were more or less specific for preventing colds or materially reducing their frequency. Thus, for a time, it was believed that vitamins played an important part in the prophylaxis of colds and some impressive reports on their use were published. However, it is now generally accepted that, while vitamin deficiencies may be included among the predisposing factors, the administration of vitamins in excess of body needs does not afford protection against colds and does not influence their number and severity.[4,6,8]

Since it is generally believed that a virus is the responsible infective agent, virus vaccines were developed in the hope that they would prevent colds. Here, too, the results were disappointing and the evidence was considered to be inconclusive.[27,28] Indeed, extensive controlled studies by many workers have shown that cold vaccines, whether given orally, parenterally or as a

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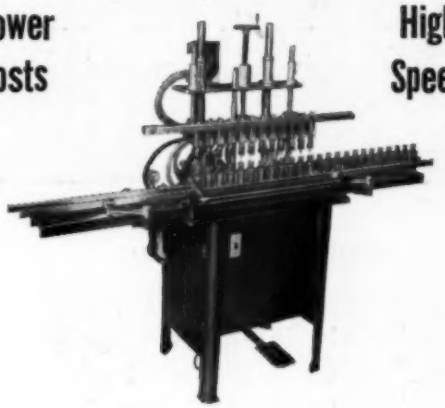

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nasal spray, do not prevent colds.[4,29] Nonetheless, the search[10,30] for an effective vaccine has not been abandoned and new technics[31] are being developed to facilitate this search.

Although new therapeutic measures are being tried constantly, in the main treatment of colds still follows the familiar pattern of rest, a light diet with plenty of fluids and the use of drugs to alleviate the various symptoms. While general opinion now holds that a moderate degree of fever is helpful in overcoming infections, it remains common practice to employ salicylates and other antipyretics. These drugs have no effect on the infectious process but help to control the restlessness and discomfort, the muscular aches and pains, and the headaches.

Aspirin, says Smith,[5] is the drug most often used and it works well, except in the rare cases of indiosyncrasy. For malaise, fever and aching, Currie[6] advises that acetylsalicylic acid (0.6 Gm.) with or without codeine sulfate (0.016 Gm.) may be taken every two hours. Phenacetin (0.3 Gm.) with sodium bicarbonate (1.0 Gm.) every three hours is frequently used. He lists another effective preparation (similar to the well-known A.P.C. or P.A.C. combination) which is composed of acetylsalicylic acid (0.3 Gm.), phenacetin (0.12 Gm.) and caffeine citrate (0.03 Gm.). Sometimes codeine sulfate (0.015 Gm.) is included. This preparation may be taken as often as every three hours.

Many other preparations have been tried in the treatment of colds, but only a few have survived the test of time. One of these is alcohol. As noted by Fabricant,[6] alcohol has been utilized to abort impending colds or to treat them. In reasonable doses it causes peripheral vasodilation and reestablishes circulation in chilled cutaneous and mucosal surfaces.

This authority also points out that nasal vosoconstrictors satisfactorily relieve nasal congestion and, when judiciously employed, aid in promoting adequate drainage from the nasal sinuses. Reimann,[29] citing a report that well over two hundred preparations of nasal vasoconstrictors as nose drops, sprays, inhalants and ointments are on the market, warns of the dangers from the improper use of such products. Nonetheless, he believes that even temporary relief from the discomfort of nasal obstruction and running nose justifies the use of vasoconstrictive drugs like ephedrine, epenephrine, naphazoline hydrochloride and amphetamine. They are, he feels, most safely applied in the form of a dilute, gentle spray or in convenient inhalers.

Smith,[5] in discussing the treatment of children's colds, has expressed a preference for nasal jellies because they have certain advantage over drops. Jellies stay in the nose longer and hence give a more prolonged action. Drops run through the nose so fast that their action is brief, unless due care is taken in their administrations. When properly given, few children will object to the use of jellies.

The formulation of various types of nasal preparations have already been discussed[32] in some detail in Drug and Cosmetic Industry. This is also the case

with other preparations used in the treatment of colds, including cough remedies,[33] chest rubs[34] and gargles.[35]

Fom time to time various substances, to be administered by inhalation, have attracted attention. Many will remember when the inhalation of chlorine gas was quite the vogue. Indeed, it is only a few years ago that chlorine inhalation was recommended by Edwards[36] for curing the common cold and reducing its frequency.

More recently, interest has turned to the possibility of using penicillin aerosols or dusts for the treatment of the common cold and its symptoms. There are those[37] who object to the use of this antibiotic for such purposes. Other workers,[38] however, have gotten good results with penicillin. They found that the common cold syndrome of acute rhinitis, lacrimation, nasopharyngitis and general malaise responded to inhalation therapy. Forty-two per cent of their cases were considered cured and 38 per cent were greatly improved by this type of treatment. In many instances, the penicillin dust seemed to exert a vasoconstrictor action of the mucous membranes of the nose and throat. Patients reported that they could breathe more freely through the nose and that the stuffiness and congestion of the acute rhinitis frequently improved immediately after treatment.

During the last year or so, much intesest has been centered on a new approach to the treatment of the common cold. This approach is based on the concept that most colds are allergic in origin and should therefore respond to antihistamine therapy as do other allergic disorders.

Of course it is well recognized that allergy plays in important part in many colds. Brown,[11] in his discussion of the causes of colds, speaks of allergic colds and describes their symptoms. Also very indicative is Smith's[5] observation that allergy not only causes hay fever and asthma, but predisposes some individuals to respiratory infections as well. In addition, there are many allergists who believe that the symptoms of many persons with acute head colds are associated with the liberation of histamine.[39] Brewster,[40] the man chiefly responsible for this new therapeutic trend, employed antihistamine agents in the belief that many common colds have an allergic origin or at least an allergic factor

Although others may have employed these drugs previously, the first mention of the use antihistaminic agents seems to be in an editorial[30] in the January, 1947 issue of *The Eye, Ear, Nose and Throat Monthly*. The editor cited the fact that an allergist of his acquaintance had treated five patients with acute colds by administering Pyribenzamine. The colds of three patients were aborted while the course of the other two cases was shortened. Attempts by the editor to obtain similar results in five cases failed to evince any improvement.

Brewster[40] first noted the palliative effect of antihistaminic agents in colds when Benadryl was being given to a patient with an alimentary form of allergy.

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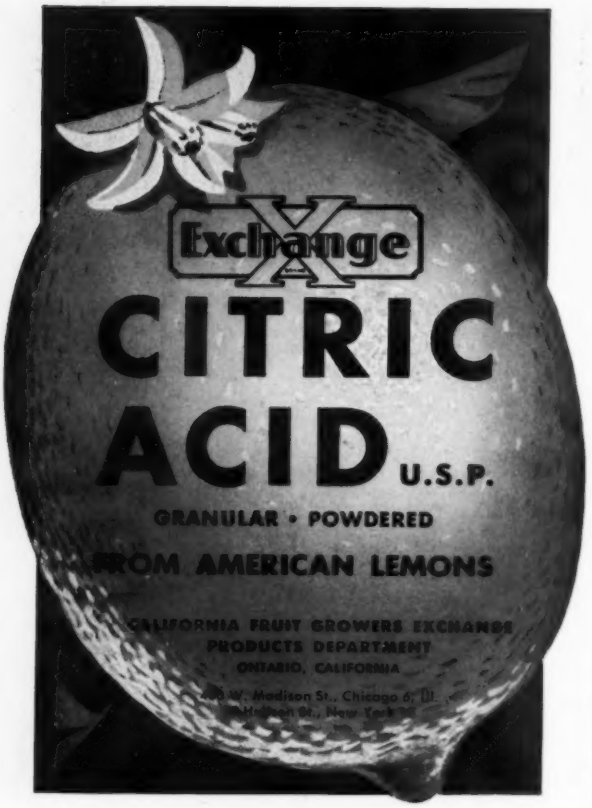

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He contracted a cold while under treatment and to everyone's surprsie the cold apparently aborted. On the basis of this observation it was decided to test the drug further. At the time of Brewster's first report Benadryl had been used in the trea ment of the common cold of virus origin in over 100 cases. It had been found to completely abort 10 per cent of such cases and to afford marked subjective relief to 95 per cent of all cases. This beneficial effect was due to the inhibiting effect of the drug upon the serous discharge from the mucous membranes of the upper respiratory tract and also to its sedative effect.

Highly encouraged, Brewster[41] started a carefully controlled, large-scale study. In this investigation, which covered a series of 572 patients with common colds, the adult dose was arbitrarily set at 50 mg. for the antihistaminic drugs (e.g. Benadryl, Pyribenzamine, Themylene, Neoantergen, and Histadyl). It was found that two or three doses of these drugs at four-hour intervals are adequate to effect an abortion of symptoms in 90 per cent of cases where treatment is instituted within a few hours after onset. Failing this, their continued use as palliative agents shortens the period of morbidity and eliminates many complications. Brewster, in this second report, points out that the effectiveness of these drugs is not dependent upon the sedative effect common, in varying degree, to all of them.

These studies also showed that timeliness is of prime importance in the successful treatment of the common cold with the antihistaminic drugs; the effectiveness of the treatment being inversely proportional to the lapse of time between the onset of symptoms and the beginning of treatment. This, of course, limits their usefulness. At present, it seems that this type of therapy will be most useful in establishments, such as industrial plants, military and naval group and the like, where controls can be instituted. Since the individual must see a doctor in order to obtain this type of medication, it is believed that real progress in the elimination of the common cold will be made when an antihistaminic drug is developed which is effective and yet sufficiently safe to permit its purchase by the public without a prescription.

The effectiveness of these drugs is being corroborated by other workers. Thus, following encouraging results obtained by one of his colleagues, Murray[42] undertook to treat the head colds of workers in a large industrial plant with Pyribenzamine (tripelinamine). Of the 494 cases that he was able to follow up, 314 were "cured" or made symptomless within three days. The treatment was of some benefit to 83 others, but the colds lasted six or seven days. No benefit was obtained by 97 persons and 22 of these cases showed an idiosyncracy to the drug. Hence, of all those treated, 75 per cent were cured or had their symptoms alleviated by the administration of the antihistaminic drug. It is understandable that Murray should describe this therapy as the most effective used in this plants medical department in the past 28 years.

In summarizing his second report Brewster states

that, "From the results achieved, it is believed that the incidence of the common cold will be reduced to a startling degree when the antishistaminic drugs are more widely prescribed for early medication of colds, much as aspirin is at the present time. These new drugs, by their action, eliminate the sneezing, coughing, and the profuse discharge from the nose which now is left invisibly on door knobs, faucet handles, hand rails, in the air we breathe, and on other places of contact. If properly and universally used, the antihistaminics could reduce the incidence of colds to near the vanishing point."

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NAIL POLISH MANUFACTURE: We would appreciate very much knowing sources of information on the manufacture of nail polishes. We would also appreciate knowing the sources of supply for the required materials. New York.

Rather complete information on the manufacture of nail polishes can be obtained by reading two recent articles on this subject. The first of these "Liquid Nail Polish" by H. J. Wing, appears in full in the Proceedings of the Scientific Section of the Toilet Goods Association, Number 8, December 1947. This was given a very comprehensive abstract which appeared in DRUG AND COSMETIC INDUSTRY for January 1948, page 131. I would also recommend that you read the article "Nail Enamel" by A. Rosenbaum, which appeared in the July 1948 issue of DRUG AND COSMETIC INDUSTRY, page 36.

I think after reading these articles, you will find it more expedient to buy prepared nail polishes directly from the houses which specialize in their manufacture.

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A Century of Pfizer

(*Continued from page 269*)

In this same manner, the Pfizer organization was maintained over the years by replacing those who retired or died by men brought up in the company. As an example, George A. Anderson, present chairman of the Board of Directors, and son of John Anderson, joined Pfizer in 1910 in the Purchasing Department. He was elected treasurer in 1914, a director in 1915, and vice-president in 1925. He became president in 1941, board chairman in 1945.

Company President John L. Smith entered Pfizer in 1906 as a laboratory assistant. He was named superintendent of plant in 1919 and a director in 1920. Holding successively the positions secretary and vice-president, Mr. Smith was elected senior vice-president in 1941. In 1945 he succeeded Mr. Anderson to the presidency.

John J. Powers, Sr., who retired at the close of the recent war, joined the company in 1909 as a salesman at the Chicago office. Mr. Powers was elected assistant secretary in 1925, a director in 1928, secretary in 1929, and vice-president in 1934. Mr. Powers was in charge of the company's sales organization for many years.

Albert A. Teeter, who resigned at the close of last year, entered the sales organization of the company in 1915 in answer to a want ad in the New York Times. He was elected a director and officer in 1928, secretary and treasurer in 1934, and vice-president in 1945. Mr. Teeter served the company in many capacities and was responsible for maintaining the company's foreign contacts and for the supervision of the purchase of foreign raw materials.

Elmer C. Otto was elected vice-president in 1945, after having served as a director since 1932, and secretary since 1934. His connection dates back to 1912 when he entered the employ of Pfizer in the Chicago office. In 1928 he was named sales manager and moved to the New York office.

Executive Vice-President John E. McKeen joined Pfizer in 1926 in which year he graduated as a chemical engineer, and was appointed assistant superintendent of works in 1938. In 1943 he was advanced to superintendent of works, he became a director in 1944, and was made vice-president in charge of all plants in 1945.

Fred J. Stock, vice-president in charge of sales, was associated with the Walgreen Drug Company for many years, becoming chief of the Drug and Cosmetic Division of the War Production Board during the war. He joined Pfizer at the close of the war in 1945 and was elected vice-president and director.

John L. Davenport, vice-president in charge of production, joined Pfizer in 1929. In 1945 he succeeded Mr. McKeen as superintendent of works. He was elected a director in 1946 and secretary in 1948.

Norman A. Grimm, a director and manager of the Chicago office, entered Pfizer in 1914 when he became a sales representative in Chicago. He was appointed manager of the Chicago office in 1944, and a director in 1946.

Company Secretary John J. Powers, Jr. joined the company in 1941 as head of its legal department. He was appointed assistant to the president in 1945, and secretary in 1949.

The sons of the original founders also played their parts in the development of the Pfizer Company. In the eighties the firm was strengthened by the introduction into the organization of Charles Pfizer Jr., Emile Pfizer, and William H. Erhart. Charles Pfizer, Jr., became the first president of the newly incorporated firm in 1900. He remained in that position until 1906 when he was succeeded by his younger brother, Emile. William H. Erhart was the company's first vice-president, and Emile Pfizer its first treasurer. The three sons of the founders, together with John Anderson, made up the company's first Board of Directors.

Charles Pfizer, Jr., relinquished his interest in the company to his younger brother, Emile, in 1912. The triumvirate which remained were men of varied capabilities. John Anderson, the leader and sales executive extraordinary, guided the over-all policy. William Erhart's major interest was in scientific and production development, while Emile Pfizer devoted much of his time to overseas affairs, particularly with regard to procurement of raw materials. Many of the company's valuable foreign connections of today may be attributed to Emile Pfizer.

Emile Pfizer, after his election as president in 1906, served in that capacity until his election as chairman of the Board of Directors in 1941, the year in which he died. William Erhart served as vice-president until 1929 when he was elected chairman of the Board of Directors. He served in that capacity until his death in 1940.

Dr. Cook Looking to Retirement

As Dr. E. Fullerton Cook plans to retire in May, 1950, as Chairman of Revision of the U. S. Pharmacopoeia, the U. S. P. Board of Trustees is holding meetings to consider the selection of a successor to Dr. Cook in the position which is now to be known as Director of Revision. When he retires next year, Dr. Cook will have served in the position for thirty years. He was first elected as Chairman of Revision in May, 1920, and was twice reelected at the decennial conventions of 1930 and 1940. Dr. Cook has labored hard in a position which was made particularly trying during his tenure of office. The heavy load which he carried with great credit to himself and to the U. S. P. was largely brought about by the increased intensity of research and development in medical science, and by the international aspect of standards for pharmaceutical products.

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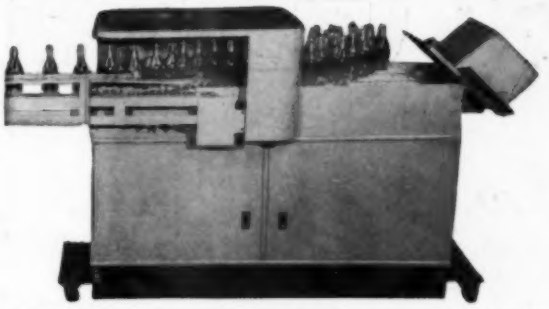

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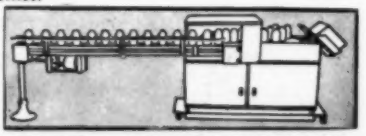

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Control of Odors in Processing

(Continued from page 279)

fication unit. After eighteen months of operation it was found that the carbon had picked up 150 pounds of odorous gases, enough to blanket the entire city to a depth of 5 feet with a nauseous concentration.

Even fumes so faint as to be below human perception will, on occasion, affect hyper-sensitive products. So light that no one could detect them, vagrant gases from a phosphorous plant three miles away would nevertheless sometimes cause streaking of the product in a photographic film plant.

By far the most general use of this development is in connection with air conditioning. An air conditioning system, depending upon the size of the space, number of occupants and their activity, will require a certain volume of fresh ventilation air in order to maintain a pleasant, agreeable atmosphere. If this air volume is new outside air it must replace an equivalent amount of conditioned air. A carbon filter, by picking up and retaining the odors generated in the space means that less new unconditioned air is required for dilution effect, and hence less conditioning capacity and less operating costs.

These are but a few of the uses to which this fairly recent development has been put. It can be applied usually wherever airborne impurities are to be removed, provided, of course, that the source of the odor is localized to some extent, or that it is practical to channel the contaminated air through the carbon.

Depending upon the type and concentration of the gases or vapors it is called upon to adsorb, activated carbon will, in time, become saturated, i.e., will have adsorbed its limit of impurities. When this point is reached, however, reactivation, a process which can be repeated almost indefinitely, restores its original "activity." The type of granular activated carbon used for this service will usually retain its efficiency until it has adsorbed about twenty per cent of its own weight in odors.

Activated carbon "air recovery" is a development of the W. B. Connor Engineering Corp. of New York.

The Government and Drugs

(Continued from page 267)

think they plan to cultivate it, they announce that they are going to grow it in South America, and probably in some of the Pacific Islands which need just such a crop to boost their economies. They don't stop to think that the Bergamot tree will grow in only one small place in the world—Reggia Calabria in Italy—; they don't stop to think that when Japanese peppermint containing 85 per cent of menthol is planted in California it soon changes to the American type which contains only fifty per cent of menthol; they don't stop to think that

a manufacturer of quinine wants no part of the South American cinchona bark containing only one-half of one per cent or less of quinine if he can get the Dutch bark from Java containing eight per cent of quinine. No they don't stop to think of a lot of things, they just make an announcement as though it were an accomplished fact. Neither do they state that a twenty-step synthesis is still a very complicated and costly way of obtaining Cortisone.

The result of these announcements on the part of the Government only make the public believe that the problem is solved and within a very short time supplies will be available. This is not true. Some of the difficulties involved in obtaining the desired raw material from this seed have been pointed up by Dr. Thomas Lewis, vice-president and technical director of S. B. Penick & Co. Says Dr. Lewis:

"The first problem will be to identify which of the fifty strophanthus species contain the wanted principle. Confusion already exists as to which types were used in the experimental work and the task of selecting and identifying the useful ones may not be fully completed for years. Even after the species are chosen, the work will just be started. Conditions of growth may affect the potency of the seed. No one knows today whether the active principle gradually disappears as the seed ages in storage or whether the drug should be gathered before ripening, when fully matured, or allowed to dry on the vines. And the hazardous part is that a bad guess may delay development a full year because nature will not cooperate and speed up the plant's growth cycle."

During the current investigation, Penick's representatives have already made preliminary checkups in more than fifteen countries, ranging from known African potential sources to purely theoretical areas in the Pacific and the Western Hemisphere. Much of the information has been negative, but has important value, says Dr. Lewis, "for in problems of this nature, the 'don't' is often as important as the 'do.'" The problems of cultivation will be even more arduous, says Dr. Lewis, who refers to the history of a group of strophanthus plants brought to this country more than ten years ago. After careful study and identification here, the strophanthus was shipped to Cienfuegos, Cuba in the hope that propagation there would be successful. Three months ago, the Penick representative in Cuba checked and found the plants in excellent condition but they had never produced seed.

Similar experiences have been encountered by the Penick Company in cultivation of other drugs. When the war cut off our supplies of belladonna, first attempts at production resulted in almost total failure although much was already known about belladonna growth. Later all these difficulties were solved and enough belladonna was cultivated by Penick to take care of all needs. However, the company recently planted some tropical seed on its 252 acre farm at Oley, Pa. No one expected the seed to germinate but

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to the technicians' amazement the plant grew abundantly. Dr. Lewis sums the situation up as follows:

"Our company has already accumulated a hundred thousand words of information, has made preliminary surveys in a quarter of the globe and has still just made a beginning. And even after efforts at this stage are completed, the chemists will have just begun what in all likelihood will be even more difficult—the actual synthesis and production of Cortisone."

Naturally the producers of Cortisone will want all these difficulties cleared away before they undertake to work out production facilities for production of Cortisone from such a source of raw material. They want to know that a sufficient supply of a uniform raw material will be available before they undertake to erect production facilities based on this raw material. One of the foremost producers interested in this project has already spent 2 million dollars cash, in addition to an enormous expenditure of the time of its executives, scientists, and others. At the present time Merck states that their production for the last five months of this year is at the rate of only 200 grams per month, or a total of 1,000 grams, all of which is being turned over to the committee directing the clinical investigation of the drug.

To show how unsettled the problem is due to the fact that many different scientists and laboratories are working feverishly to solve the problem, shortly after the announcement was made of strophanthus seed as a raw material source, another scientist, Dr. Russell E. Marker, announced another raw material which he says is immediately available from the Mexican yam. To quote Dr. Marker:

"Strophanthus may one day provide an unlimited source of raw material, but dioscorea (tropical yam) offers an indigenous and important source which is immediately available."

The raw material which Dr. Marker obtained from the yam is known as botogenin. He found the yam growing in abundance in Mexico and Central America, and from the present viewpoint might offer the most rapid approach to immediate more plentiful supplies.

The fact that faces everyone involved in this problem is that there is no telling when, where, or through whom a much superior raw material or a much shorter synthesis, cutting costs and making production facilities immediately obsolete, will appear. The problem is so complex, but the rewards so great, that the best scientific minds in the country are at work on it. And so much depends on the results of the clinical investigation now being made, that the future at the moment truly uncertain. It is quite likely that Cortisone will provide an answer to the correction of conditions resulting from many other diseases than arthritis and rheumatic fever. Then there is the possibility that the side effects might cause its use to be contra-indicated in a very large percentage of cases. Naturally, if the latter is so, the search will start for other forms of the material will not exhibit such dangerous side effects, or for other

drugs to be used with Cortisone to offset these side effects.

Where the Government will eventually fit into this picture it is difficult to say at the present time. Private funds are being freely expended in this search and perhaps the Government is only standing by to aid private enterprise in solving the problem if help is needed. However, there are those who are afraid that the present trend in our Government, particularly as indicated by the Administration's determined effort to enact compulsory health insurance, means that the Government might force its way further into the picture, even to the extent of forcing manufacturing concerns to pool all their knowledge of production just as they did during the war days.

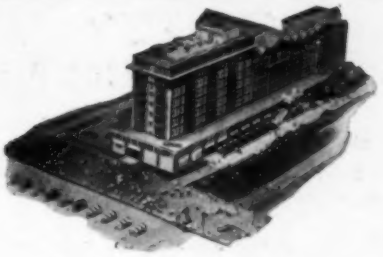
It does not appear that this is the situation as yet. However, the Federal Security Administration has jumped into the picture with both feet to aid in setting up the sources of supply if strophanthus seed is used as a raw material. In addition to this, Social Security Administrator J. Oscar Ewing has announced that as the result of this discovery, the FSA is asking for $750,000 to be spent on research into botanicals as sources of hormones. Where the search will lead, nobody knows but it will be recalled that not too long ago it was discovered that sarsaparilla root was found to contain a chemical substance that was quite easily converted into testosterone, the male sex hormone.

The Cortisone development is of sufficient interest for everyone in this industry to follow its progress whether or not they are actually engaged in solving the problem themselves. We think that it would be wise for everyone to follow this development to see just how far the Government steps into the picture, and once they are in, when they step out—if they ever do. A close study of this situation might give an indication of what lies ahead for the pharmaceutical manufacturing industry, especially with respect to important new products.

WATERLESS HAND CLEANER: I have had a number of calls for a waterless hand cleaner (creamy type). I have looked through a number of back issues of Drug and Cosmetic Industry. However, I was unable to find any mention of same. If you have a real good cleaner of this type, will you kindly send it on? Syracuse.

Products of this type have been described from time to time in this publication. From the article on cellulose derivatives, which was published in a recent issue of Drug and Cosmetic Industry, comes the following formula; a paste-like product which is rubbed into the hands until it falls off as dry flakes.

Methyl cellulose (4000 cps.)	**14.3**	**parts**
Alcohol	**5.5**	"
Glycerine	**5.5**	"
Lanolin	**0.3**	"
Menthol	**0.1**	"
Propyl parahydroxybenzoate	**0.3**	"
Distilled water	**74.0**	"



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DRUG OUTPUT TOPS BILLION

In the first census of the output of medicinal products taken in this country in eight years, the total of sales at manufacturing levels has trebled. The Bureau of the Census of the U. S. Department of Commerce has issued a report for 1947, the last previous census being for 1939. Four classifications are included in the census: biological products, botanical products, medicinal chemicals, and pharmaceutical preparations. The total value of products shipped for all classifications was $1,198,621,000 for 1947, against $386,357,000 in 1939. Breaking these figures down into the four classifications, we find that Biological Products in 1947 totaled $38,752,000 in 1947, against $19,449,000 in 1939; Botanical Products totaled $16,395,000 in 1947, against $7,669,000 in 1939; Medicinal Chemicals totaled $201,761,000 in 1947, against $21,015,000 in 1939; and Pharmaceutical Preparations totaled $941,713,000 in 1947, against $338,224,000 in 1939.

The biological classification includes viruses, serums, toxins, and analogous products such as allergenic extracts, and normal serums and plasmas for human or veterinary use, as well as bacteriological media. The botanical drugs classification includes the grading, grinding, and milling of botanical drugs and herbs, as well as production of agar agar. The medicinal chemicals classification includes bulk organic and inorganic medicinal chemicals and their derivatives, as well as endocrine products, basic vitamins, and active medicinal principles such as alkaloids from botancial drugs and herbs. Neutral principles, drugs of animal origin, and inorganic and organic bulk medicinals are included for the first time in this census. Therefore, commodity figures for earlier years are not available for these products with the exception of some data for alkaloids and their derivatives. The pharmaceutical preparations classification includes ampules, tablets, capsules, ointments, solutions, and suspensions, for human and veterinary use, including vitamin preparations and Galenicals such as fluid extracts and tinctures, promoted both to the public and to the dental, medical, and veterinary professions.

READERS' QUESTIONS

HEAD LICE REMEDIES: I will thank you for a formula that is effective for head lice on humans but non-injurious to the person using the remedy. I have information on formulas that have drugs which kill the lice but the people, especially children, using the preparation let it go on to their face which causes trouble with the eyes. I hope you will suggest something that is potent and safe to use. Minaca.

According to the Sulzberger and Wolf text on dermatology, the use of a preparation commonly known as NBIN serves to kill lice and remove the nits in a single application This preparation consists of:

DDT	**1.0 per cent**
Benzocaine	**2.0 " "**
Benzyl benzoate	**10.0 " "**
Polyoxyalkylene sorbitan monooleate ("Tween 80)	**2.0 " "**
Water, to make	**100.0 " "**

A coating of the emulsion is applied thoroughly to the hair or scalp with a brush and followed by a shampoo with soap and water the next day. If infestation is severe and there is considerable pyococcic infection, it is advisable to repeat the treatment two or three times on successive or alternate days. Fine-combing is not necessary.

Another preparation, which has proven quite effective and which I believe has been tested in Mexico, consists of:

Phenyl "Cellosolve	**40.0**
Water	**25.0**
Ethanol	**30.0**
Methyl salicylate	**5.0**

The lotion is applied to the head so that the hair is thoroughly wet. The fluid must be kept out of the eyes and mouth. There is brief tingling but no irritation. No lice were found alive after a single treatment.

AMMONIATED DENTAL PREPARATIONS: I shall be much obliged if you can let me have some information on the dental powder and mouth wash containing urea (carbamide) and di-ammonium-phosphate. These have attracted considerable attention here and any information will be greatly appreciated. Johannesburg.

Formulas for a mouth wash and powder were given in the original report by R. G. Kesel, J. F. O'Donnell, E. R. Kirch and E. C. Wach, (*Am. J. Orthodont. & Oral Surg.* 33:80, 1947). As given in this report, the formulas are as follows:

Rinse

Dibasic ammonium phosphate	**50.0 Gm.**
Urea	**30.0 Gm.**
Glycerine	**100.0 cc.**
Alcohol	**40.0 cc.**
Saccharin sodium	**1.0 Gm.**
Menthol	**0.4 Gm.**
Amaranth solution, U.S.P.	**2.0 Gm.**
Sodium benzoate	**1.0 Gm.**
Distilled water, to make	**1000.0 cc.**

Powder

Dibasic ammonium phosphate	**50.0 Gm.**
Urea	**30.0 Gm.**
Bentonite	**50.0 Gm.**
Pptd. calcium carbonate	**866.0 Gm.**
Saccharin	**2.0 Gm.**
Menthol	**2.0 Gm.**
Peppermint oil	**2.0 cc.**
Cinnamon oil	**1.0 cc.**
Methyl salicylate	**6.0 cc.**
"Duponal"	**10.0 Gm.**

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